DOCUMENT RESUME

ED 262 164	CE 042 487

AUTHOR	Davis, Russell; And Others
TITLE	Inservice Training for Regional Planning/Articulation of Vocational Education: A Resource Manual.
INSTITUTION	North Texas State Univ., Denton. Coll. of Education.
SPONS AGENCY	Texas Education Agency, Austin. Dept. of Occupational Education and Technology.
PUB DATE	85
NOTE	178p.; For a related document, see CE 042 489.
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC08 Plus Postage.
DESCRIPTORS	Agency Cooperation; *Articulation (Education); Communication Skills; *Cooperative Planning; Coordination; Educational Cooperation; Educational Planning; Government School Relationship; *Inservice Education; Labor Needs; Models; Needs Assessment; Planning Commissions; Postsecondary Education; Questionnaires; *Regional Planning; School Business Relationship; School Districts; Secondary Education; Staff Utilization; *Statewide Planning; Surveys; *Vocational Education
IDENTIFIERS	*Texas

ABSTRACT

This guide is designed to serve as (1) instructional materials for training those assigned to provide technical assistance in the regional planning and articulation of vocational education and (2) a resource to familiarize and train the recipients of the planning processes. Addressed in the individual chapters of the manual are the following topics: the rationale for regional planning and articulation, the representational make-up of the regional planning model, the planning process, orientation and use of the planning committee, procedures for planning on a regional basis, development and implementation of a communication system, and the process of articulation. The final section of the guide contains 26 handouts dealing with such topics as assessing the need for workers in priority occupations; comparing enrollment and labor market projections; administering a community occupational survey; planning a training program; developing a communication system; implementing followup activities; and tracking data flow at the local, regional, and state levels. (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED262164

CE042487

BEST COPY AVAILABLE

INSERVICE TRAINING FOR REGIONAL PLANNING/ARTICULATION OF VOCATIONAL EDUCATION: A RESOURCE MANUAL

Russell Davis

Roger Ritzenberger

Marcia Jones

Bill E. Lovelace

Division of Occupational and Vocational Education
College of Education
North Texas State University

1985

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

L Kemp

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

FUNDING INFORMATION

Project Title:	Regional Planning/Articulation of Vocational Education
Project Number:	55420006
Funding Source:	Education Amendments of 1976, P.L. 94-482
Source of Contract:	Research Coordinating Unit Department of Occupational Education and Technology Texas Education Agency Austin, Texas
Contractor:	Division of Occupational and Vocational Education College of Education North Texas State University Denton, Texas
Project Administrator:	Roger Ditzenberger
Disclaimer:	This publication was prepared pursuant to a contract with the Department of Occupational Education and Technology, Texas Education Agency. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgement in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Texas Education Agency position or policy.
Discrimination Prohibited:	Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title IX of the Education Amendments of 1972 states: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

INSERVICE TRAINING FOR
REGIONAL PLANNING/ARTICULATION
OF VOCATIONAL EDUCATION: A RESOURCE MANUAL

Table of Contents

FOREWORD iv

I. RATIONALE FOR REGIONAL PLANNING/ARTICULATION 1

II. REPRESENTATIONAL MAKE-UP OF THE REGIONAL PLANNING MODEL 4

III. THE PLANNING PROCESS 11

IV. ORIENTATION AND USE OF THE PLANNING COMMITTEE 20

V. PROCEDURES FOR PLANNING ON A REGIONAL BASIS 32

VI. COMMUNICATION SYSTEM 101

VII. PROCESS OF ARTICULATION 118

VIII. HANDOUTS 131

FOREWORD

For years there have been legislative mandates for computation and linkages between and among Federal and State agencies for planning of vocational education and job training programs. Projects have been funded and completed which have advocated and made recommendations for the desired cooperation and linkages. Current legislation for vocational education and job training supports the achievement of the joint efforts of linkage and articulation of planning between and among all entities through technical assistance on a regional basis.

During the development of a model for Regional Planning/Articulation of Vocational Education in Texas, this document was produced. This document is a resource and a guide that will help staff of the Texas State Board for Vocational Education to provide Technical Assistance on a regional basis to local providers of vocational education and job training programs. Technical Assistance is needed to all entities involved in planning and/or conducting vocational education and job training programs, and will ensure that vocational education and job skill training programs are responsive to the needs of the labor market.

This document serves as: (1) Instructional materials for the training of those who are assigned to provide technical assistance; and (2) A source for the familiarizing and training of the recipients of the processes of Regional Planning/Articulation.

Three other documents developed by the Regional Planning/Articulation project are: (1) TECHNICAL ASSISTANCE BY REGION FOR PLANNING AND ARTICULATION OF VOCATIONAL/TECHNICAL EDUCATION AND JOB TRAINING: A GUIDE; (2) COMMUNICATION SYSTEMS DESIGN FOR REGIONAL PLANNING/ARTICULATION OF VOCATIONAL EDUCATION; and (3) GUIDE OF ARTICULATION PROCESSES.

With the mandates and procedures for planning and articulation of vocational education by technical assistance on a regional basis, it is anticipated that the long desired achievement of articulation of all entities involved in vocational education and job training will ensure that local providers will be more capable in planning vocational education job training programs which are responsive to the needs of the labor market and the populations desiring and needing the training programs.

Roger Ditzenberger
Project Administrator

I. RATIONALE FOR REGIONAL PLANNING/ARTICULATION

The purpose of the Regional Planning Articulation is to develop procedures for providing technical assistance to all entities in the planning and articulation of vocational education and job skill training at a regional level. The mission of Regional Planning/ Articulation will assist in the function of its purpose. The fourfold mission of the Technical Assistance Region is to: (1) provide a framework for identifying estimates of need for job skills training and vocational education; (2) assess training demands and needs of the employing community; (3) coordinate the delivery of vocational education and job skills training to meet the identified needs; and (4) promote articulation and collaboration of all entities concerned with job skills training within the region in relation to the needs of identified priority occupations.

The Regional Planning/Articulation Model consists of four components. In its overall framework, each component meets at a common vector, showing how they overlap. The overlapping of the components signifies that the design is supportive. Each component is dependent and supportive of the other components involved. However, it is important to note that with each component being separate, they can function as an entity or element on its own. Thesse individual but related components are essential for the operation. They are necessary for the implementation and improvement of the entire system. The components of the model are: (1) planning system; (2) communication systems; (3) system for articulation; (4) the support system of inservice training.

(Handout I - A)

Design of Regional Planning/Articulation
for
Vocational/Technical Education and Training

Planning Processes

- Identify Priority Occupation
- Determine Training Needs
- Determine Training Requirements
- Identify Resources
- Plan Training Programs
- Demographic Profile

Communication System

- Collection and Dissemination of Data of the Planning Process

- Collection and Dissemination of Data for the Process of Articulation

- Collection and Dissemination of Data for Technical Assistance

Process of Articulation

- Strategies for Collaboration of all entities in planning, implementation, and technical training

- Identification of Resources for Articulation

Process of In-service training

- Training of TAR staff and committees
- Familiarization of users with the RP/A unit

II. REPRESENTATIONAL MAKEUP OF THE REGIONAL/PLANNING MODEL

In order to comply with the mandates for articulation of secondary and postsecondary vocational programs, the representational makeup f the Regional Planning/Articulation Model must be appropriated. There are three major areas of representation. The first being the Technical Area Regional staff (TARS); the second is the Technical Advisory Committees and the third involves the recipients of the technical assistance being provided.

(Handout II - A)

The staff of the Regional Area should be housed in a public facility which is centrally located to the greatest population of providers as possible within the region. These offices can be staffed using personnel presently assigned as vocational consultants in the regional area. The primary function of the office staff will be to coordinate the activities of the Technical Advisory Committee (TAC), interpret and disseminate to local providers state level policies and provide technical assistance to the providers in planning job skill training programs. The TAR Staff will also serve the TAC in carrying out the research and assessments to achievement of the functions of the TAC.

MODEL FOR REGIONAL PLANNING/ARTICULATION

The Structure for Regional Planning/Articulation

I. Organization and composition of the planning body.

* Representatives of all entities (advisory committee).

** Business, Industry, Government.

*** Labor, Management.
*** Agriculture, Homemaking Related, Health, Trade, and Industrial (Manufacturing, Construction, Service, and Repair), Office, Technical, Marketing and Distributive Education, ASTD, and Chambers of Commerce.

** Local providers of vocational/technical education and training.

*** Vocational administrators (secondary, postsecondary), public school superintendents, proprietary schools, JPTA Administrators, Education Service Centers.

** Regional Offices of related state agencies.

*** Texas Employment Commission, Councils of Government, Economic Planning, T.E.A., Local Departments of Human Resources, Texas Rehabilitation, MHMR, TRC, TYC, and programs conducted by Texas A & M.

* Staff.

** Minimum - one full time professional funded by the Texas Education Agency, one full time support person (secretary), and one half-time clerk-typist.

** Desired - two full time professionals: one funded by the Texas Education Agency and one funded by the Texas Department of Community Affairs. Two support staff (one secretary and one clerk-typist).

II. Geographic Boundaries of the Planning/Articulation Region.

The geographic area of the region should be the same as that of the state agency(s) data collection areas.

III. Physical Location and Facilities.

The Regional Planning/Articulation staff should be housed in facilities of a public entity which is as centrally located as possible to the greatest population of providers within. In addition to standard furniture and equipment found in most offices, the office should be furnished with (1) a microcomputer with capability of tying in with other data systems, (2) audio visual equipment, and (3) duplication equipment.

IV. Mission Statement.

V. Goals and Functions of the Regional Planning/Articulation Body (committee and staff).

Regional planning, as a process, is considered as a means to achieve appropriate ends. The planning process must include procedures for identifcation of feasible courses of action, based upon established priorities.

It is proposed that the regional planning body serve three specific goals in the planning process. These specific goals are:

A. Serve in an advisory capacity to the staff of the State Agencies of Vocational Education and other state boards or commissions responsible for job skill development and training (vocational/technical education and training).

B. Serve as a unit of communication of information needed by entities in the region for planning vocational/technical education and training activities.

C. Serving as a means for an articulated and collaborative approach for the planning of vocational/technical education and training by all entities within the region.

In carrying out the above three goals, the Regional Planning/Articulation body should perform the following functions:

* Determine regional priority of need for training by occupations.

* Compile resources for training for each priority occupation from information provided.

* Identify competencies desired for each priority occupation through the collection of available resources.

- Enhancing the image of Vocational Education and Training through communication networking with the entities who are involved in vocational planning within the region.

- Provide leadership and coordination for collaboration (articulation) of vocational/technical education and training between entities of the region.

- Provide a report of findings and recommendations of the planning body to: all providers within the region; the staffs of vocational education, employment and training; and other state agencies and commissions responsible within the state.

- Provide technical assistance in Regional Planning and Collaboration (Articulation) processes within the region.

In addition to the collection, analysis, and dissemination of planning of articulation data, the TARS will provide training and technical assistance in areas of supply-demand data, competency based curriculum improvement, and process for articulation.

The Technical Advisory Committee is essential to the success of each Regional Planning/ Articulation unit. The composition of the Technical Advisory Committee (TAC) should include:

-one member from each postsecondary provider of job training within the region.

-one member from each association or organization representing employers (business, industry, government) and employees within the region;

-one member of each Joint Training Partnership Act (JTPA) service delivery area within the region.

The basic objectives to be achieved by the TAC and staff are:

-Determine Regional priority occupations;

-Establish appropriate subcommittees of employers and job trainers to assess the resources available to meet the training need of the priority occupations;

-Provide planning and research assistance to job training providers within the region;

-Serve in an advisory capacity to the staff of the State Board for Vocational Education and other commissions responsible for job skills training in identifying priority occupations for vocational training in the region in relation to priorities of the region to the planning and evaluation staff of the State Board for Vocational Education and other state boards and commissions responsible for job skills training;

- Validate the competencies required for each priority occupation;
- Provide guidance in the development of articulation agreements between post-secondary institutions (horizontal) and between postsecondary and secondary institutions (vertical); and
- Serve as a means for an articulated and collaborative approach of all entities for Regional Planning and Articulation.

The aim of the above functions carried out by the TAC and the Regional Planning Staff, is to provide technical assistance to the recipients of the denoted tasks. The recipients of this model are broken down into three groups: Secondary, Post-secondary, and Adult.

A POSTSECONDARY STUDENT is a person who is enrolled in a vocational instructional program identified by the six-digit CIP instructional code for which credit is given toward an associate degree. Persons who are pursuing a certificate or license, rather than an associate degree, even though they may be concurrently receiving credit toward an associate degree, shall be classified as adults. A SECONDARY STUDENT is a person in grades 6 - 12 (pursuing a high school diploma) who is enrolled in a vocational instructional program, or who is served through other vocational programs, services, or activities. An ADULT is a person 16 years of age or older who is enrolled in a vocational instructional program, which does not lead to a high school diploma nor to a post secondary associate degree. This includes persons who are pursuing a certificate or a license, but not an associate degree, even though they may be receiving credit concurrently toward an associate degree.

III. THE PLANNING PROCESS

Vocational/technical education and job training personnel have traditionally approached the task of planning and development in a logical and organized manner; that is, systematically. Being systematic, however, is not the same thing as applying a systems approach for strategic planning. Strategic planning is essential when established criteria for the allociations of resources (funding) have been mandated by governmental bodies. The mandated criteria automatically establish the objectives of planners at the state, regional, and local levels. The first step in any planning process is an analysis of the systems or organization to be served as shown in Transparency III - 1. In the case of the Regional Planning/Articulation (R P/A) unit, an analysis must be made of all entities to be served by the unit. Analysis begins with assessment. Assessment will identify the demographic and economic characteristics of the area served by the R P/A unit. Also, the assessment process will identify barriers that prevent the collection of desired information for assessment. The analysis of the region serves as a base for achieving all of the objectives of the R P/A unit.

(Transparency III - 1)

For the Regional Planning Committee to effectively function as a planning body and as individual members, then it naturally follows that each member of the planning body should possess more than a casual knowledge of how the planning process works. Each of the planning body members should know some of the critical considerations affecting the manner in which planning proceeds. Since the planning process for vocational education is carried on successfully in such a variety of ways by separate state agencies, it would be a practical impossibility to describe any single way of planning for vocational education as the correct way. Instead of attempting that, we shall consider certain fundamentals of the planning process that are universally appropriate for all types of planning wherever and for whatever purpose that planning might occur.

Let us begin at the beginning with some facts and definitions concerning the planning process. Planning is not a static enterprise. Planning is not something which is attempted, completed, and then put aside until a next planning cycle. Planning is a dynamic process which is continually going on and in which certain critical considerations are examined and evaluated in an identifiable and logical order, as follows:

FIRST: To establish where you are and what you are at the present time.

SECOND: To establish where you would like to be after a given period of time has elapsed.

THIRD: To establish why you would like to be where you would like to be.

FOURTH: To identify how you intend to get from where you are, not to where you want to be.

FIFTH: To establish when you can expect to get where you want to be.

SIXTH: To determine who will be responsible for doing what.

SEVENTH: To establish how much it will cost.

FINALLY: To identify assessment procedures for continuously monitoring program progress.

Whether in vocational education or in any other field where planning is essential for program progress and growth, three types of planning go on, and these three types of planning are identifiable primarily by the length of the period of time for which planning is taking place. They are as follows:

SHORT-RANGE PLANNING:

This is a type of planning which concerns itself with a period of time of 2 years or less with particular emphasis on the coming 6 months. This short-range planning is frequently referred to as "operational planning."

INTERMEDIATE-RANGE PLANNING:

This is a type of planning which concerns itself with a period of time of from 2 to 5 years. Many writers in the field of management science insist that intermediate-range planning is an illusion; that it is long-range planning for a length of time which is shorter than the length of time typically reserved to long-range planning.

LONG-RANGE PLANNING:

This is a type of planning which concerns itself with a period of time of 5 years or more. Long-range planning is frequently confused with and mis-labeled as "strategic planning." Strategic planning has its origins in long-range planning, but strategic planning is more factually based--is less abstract--than long-range planning.

SHORT-RANGE PLANNING FURTHER DEFINED:

A short-range plan is typically an extrapolation of the early period of a long-range plan. As such, it is the management tool through which the organizational managers exert operational control over the first-year (or other such period) events which are broadly prescribed in the long-range plan.

LONG-RANGE PLANNING FURTHER DEFINED:

A long-range plan is a visionary--a "futures" oriented--document which concerns itself with the long-term consequences of decisions made in the present. It represents a selection of rational alternatives from a number of possible alternatives available to the planners.

Planning of any type cannot be considered separately from the organization the plan is designed to serve. A plan is, in fact, a blueprint for organizational behavior. Because of this obvious fact, it is important that we consider briefly the relationship between the planning process and organizational objectives.

Organizational objectives can be classified as one or the other of the two basic types:

1. Long-range organizational objectives which are typically derived from established goals for the organization and which have a direct effect on the development of the long-range plan.

2. Short-range organizational objectives which are typically derived from long-range objectives and which become the basis for managerial actions governing the day-to-day operation of the organization.

It is important to see how both short-range and long-range organizational objectives fit into the overall picture of the planning process. For that, we shall examine the total planning process in the order in which it generally proceeds from start to finish.

Planning is essentially a four-step process in which the steps typically occur in the order in which they are presented here:

STEP 1: ANALYSIS OF THE ORGANIZATION

The planning process is initiated with the planner examining the organization for which the plan is to be developed. In the case of regional planning, the organization is the regional area. The region is analyzed as it exists today and as it has existed in the past. The planner looks at the composition of its region's strengths, its weaknesses, its historical record of wins and losses, its place in the larger scheme of things, its relationship to other organizations, its personnel and their qualifications, its management, its material resources, its actual as well as its anticipated financial resources, and other such considerations. In short, the planner looks at all that is good about the region and weighs this against all that is less-good about the regional composition. It is absolutely essential for the planner to conduct this analysis if the planner is to be able to make rational choices relative to the alternative courses of action may be foreclosed by certain characteristics which can only be revealed by a thorough analysis of the region. As a part of this analytical process, it is frequently necessary to look outside of the organization in order to identify regional, state, or national trends which might need to be considered in the formulation of a plan for the region.

STEP 2: ESTABLISHING LONG-RANGE OBJECTIVES

After having thoroughly analyzed the organization, the planner then formulates the region's objectives for the long-term future. In the development of these objectives, questions such as the following must be asked if the long-range objectives are to have any validity:

*We know what the regional composition is like today. How different do we want the region to be in five years (or in however many number of years the plan is being developed for)?

*Are we satisfied with the quality and quantity of the region's output? If so, how can we maintain an equivalent output over the long-term future? If not, what changes are required to improve the output over the long-term future?

*Over the long-term future, will there be a demand for the product we are turning out today? If not, what sort of product will be in demand in the future that is not in demand today?

*How much growth do we want over the long-term future? How much growth is possible over the long-term future?

STEP 3: DEVELOPMENT OF STRATEGIES

After the long-range objectives are developed, after they have been coordinated with all interested agencies and individuals, and after they have been put into final form, the development and defining strategies for accomplishing the long-range objectives is the act of describing the routes the organization will take to get from where it is today to where the planner has determined that it should be in the long-term future. For each long-range objective, there should be at least one clearly defined strategy for accomplishing that objective. Some objectives will require the development of multiple strategies if the long-range objectives are to be accomplished.

STEP 4: ESTABLISHING SHORT-RANGE OBJECTIVES

In Step 2 of this description of the planning process, we stated that the asking of general questions similar to the following was necessary to the development of valid long-range objectives:

*We know what the regional structure is like today. How different should it be in five years (or in however any number of years the plan is being developed for)?

Here, in establishing short-range objectives, we must ask questions that are more precise, such as the following:

*What must we do today--and next month and the month after that--to put into motion the actions that will cause the organization to be like what we want it to be like in five years?

It is here that objectives are developed that will specify the immediate steps that must be taken by the organization if the long-range objectives are to be realized. If there is an "Annual Plan" for the region, then these short-range objectives are developed, that program review and measurement procedures are developed and incorporated into the plan. without such program review and measurement procedures, it would be next to impossible for management to determine whether or not the short-range and long-range objectives are being carried out.

Planning is not an easy thing to do. Short-range planning is difficult due simply to the fact that the long-range future is filled with so many uncertainties. Planning is a complex task requiring a great deal of thought, time, and concentrated effort. In spite of the difficulties inherent in the process, a great deal of highly successful planning is accomplished, and a great deal of this successful planning goes on in planning for vocational education and training. It would be naive, though, to insist that all planning for vocational education is successful planning. The process does go wrong at times. The following are just a few of the ways in which the planning process goes wrong:

*The planning process begins, as it should begin, with an analysis of the region. In this analysis, the way things have been done in the past and the way things are done today are examined. Then, the planning process focuses upon extending present-day activities into the future for a given number of years allowing only for natural growth and refinement of on-going programs. This is not long-range planning. It is, instead, an extrapolation of the present into the future.

*Incorrect assumptions are made concerning the continuity of present activities and events. It is both illogical and impractical to assume that things will continue to go on in the future as they have gone on in the past. If there is anything certain about the future, it is its uncertainty. To assume that there is any degree of certainty about the future is to prevent some very important "what if" questions from being asked and answered.

*The planning process begins correctly with an analysis of the region and proceeds through the development of long-range objectives. Then, without evolving the strategies for the accomplishment of long-range strategies, the short-range objectives have little bases in reality.

These are only some of the ways in which planning can go wrong. There are others. Strangely enough, when the planning process does go wrong, it goes wrong because some well-established and thoroughly validated planning fundamental is violated. Rarely does the process go wrong because the planning in a given region proceeds in a way that is quite different from the way that it might be done is some other state. Planning for vocational education goes on in almost as many different ways in the various states as there are different states, but these dissimilarities in the ways in which the process proceeds and in the forms of the final product have nothing to do with the quality of the plans which are evolved. As we have said before, most of these plans are highly successful. When they are less than successful, it is, more often than not, because some fundamental of planning has been neglected.

Regional vocational education planners can provide orientation to better utilize the members of the Congressionally mandated vocational education planning bodies. Only through the maximum utilization of this entire planning body can state agencies of vocational education provide the quality of vocational education planning and accountability reporting required by Congress under the provisions of various laws which provide financial assistance to states and local providers of vocational education (vocational/technical education and training).

IV. ORIENTATION AND USE OF THE PLANNING COMMITTEE

It is our purpose to provide general information which can be of value to local providers of vocational/technical education and training in providing orientation to the vocational education planning body. The subject areas covering this general information were suggested by several sources; sources involved in planning for vocational education. All such sources suggest that these are the critical areas to be covered if the planning body is to function effectively and to contribute the maximum amount possible to each provider's vocational education planning efforts.

The subject areas to be covered are as follows:

1. PROVIDING ORIENTATION TO THE PLANNING BODY.
2. PROVIDING INPUT TO THE PLANNING BODY
3. PLANNING BODY CHARACTERISTICS AND DYNAMICS.
4. PLANNING BODY OPERATIONS.

In each of these major subject areas, we shall outline certain techniques and procedures suggested by various sources. In all instances, these techniques and procedures are those practiced by and proven to be successful in vocational education planning bodies in various locales throughout the United States. No attempt will be made in this manual to compare the relative merits of any given techniques or procedures. It will be left entirely to the discretion of the users of this manual to determine if a given technique or procedure is appropriate to their particular circumstances.

Certainly, one of the first things to be done in planning body orientation is organizing and structuring that body. This can be accomplished in an entirely democratic fashion--with the planning body determining its own operational form, or it can be the result of some arbitrary decision on the part of some higher authority. In either event, the organizing process will probably include the following:

*The election or appointment of a Chairperson. Any one of several options are available to accomplish this, but the more common are to elect the Chairperson from the planning body membership, or to elect a Chairperson from outside the body membership.

*The creation of committees, the selection of a committee Chairperson, and the making of committee assignments. Standing committees are almost a requirement if the work load is to be evenly distributed throughout the membership. Ad hoc committees are formed, naturally, as specific needs for such committees are identified. Standing committees might be in such areas as research, agenda, public relations, and the like.

After the organization of the planning body is complete, it makes a great deal of sense to inform the membership as to precisely what their responsibilities are--as well as what responsibilities they do not have. These responsibilities will naturally include a few which are peculiar to the area within which the planning body is functioning, but there are other responsibilities--and non-responsibilities--that are almost universal. Some of the more significant of these are as follows:

- *As a group, the planning body has the responsibility both to advise and to inform the local providers and state agencies responsible for Vocational Education in all matters pertaining to vocational education in the region.

- *As a group, the planning body has no policy-making responsibility other than in matters relating to the functioning of the planning body itself.

- *As a group, the planning body has no responsibility for final decisions made relative to the implementation and conduct of vocational education programs in the region.

- *As individual members of the planning body representing some parent organization*, each individual member has the responsibility to function as an advocate for that parent organization's position.

- *As a representative of some parent agency, each individual has the responsibility to keep that agency fully informed relative to the planning body's actions.

- *As a member of the planning body, each individual has no responsibility to function as an advocate of a personal position or a vested interest.

After the planning body is organized, and after the body and its individual members have been informed as to what their responsibilities are--and are not--a logical next step would be to fully explore the requirements of Public Law, under which vocational education is sponsored. Numerous planning body representatives have stated that this is, in fact, the first action taken by the planning body; to become fully informed as to the provisions of the laws.

---

*While it is true that certain of the members of the planning body have no parent "organization as such--for example--the representative of vocational education teachers, the term "organization" is used to refer to any organization or constituency served by the various members of the planning body.

Other subject areas typically a part of the orientation of the planning body include all of the following:

*A review of the mission and goals for vocational education at the state, region, and local levels.

*A review of the roles and responsibilities of the various advisory councils and groups for vocational education.

*An examination and review of each state agencies' five-year plan for vocational education.

*An examination and review of the developmental process for the local providers annual program plan for vocational education.

*A review of the calendar of events relative to the current or coming planning cycle.

*An examination of the implicit or expressed philosophy of the State Board of Vocational Education relative to the requirements of Federal Law.

*An introduction to the planning process.

*As appropriate, introductions to and briefing by those key actors in the state's vocational education planning and operational efforts.

*Where such publications are available, an examination and review of vocational education policy and procedure handbooks and related literature.

In addition to the preceding subjects which are typically a part of the orientation of the planning bodies in the state, there are some other subject areas which should be covered in the region. Among these are the following:

*The demographic characteristics of the region.

*Present and projected manpower requirements of the region.

*Funding sources.

*Levels of funding for the vocational education effort.

*Funding formulae for various vocational education programs.

*Local education agency organizational and operating characteristics.

*Data input sources and uses of such data.

After the planning body orientation is considered complete, certain operational procedures should be established and more widely known to all interested parties. Foremost among these operational procedures is the development and publication of a calendar of events involving the planning body. Required meeting dates and meeting locales should be made as firm as is practical, and a tentative agenda for each such meeting should be developed and published. It cannot be stressed too strongly that all of this should be accomplished as early in the planning year as is possible. It is equally important that the meeting dates for the planning body should be spread out over the entire planning year. There is almost universal agreement that the effectiveness of the planning body is greatly diminished if the required meeting dates are crowded into a relatively few months.

Another important operational procedure to be established has to do with insuring agency representation of all providers and users at each meeting of the planning body. It is, of course, up to each organization (business, industry, government, and educational/training) to determine who will be the organizational representative on the planning body, but, certainly, one consideration in the selection of the organization representative should be that individual's availability for any meeting of that body or for any meeting of a committee representing that body. Nothing should be allowed to interfere with full representation on the planning body; however, unforeseen circumstances could prevent the designated representative from attending one or more of the planning body's meetings. For this reason, the operational procedures of the planning body should incorporate some way of insuring full and adequate representation for all organizations, such as a requirement for the designation of alternate organizational representatives.

While we are on the subject of organizational representation on the planning body, it has been suggested by various sources that the State Agencies for Vocational Education could serve as a positive influence in the selection of organizational representatives who will serve on the planning body.

Countless other ways exist throughout the state for "providing orientation to the planning body," but we cannot hope to cover tham all in this paper. Here, we have only presented suggestions which reflect the more common subjects covered in such orientation periods. It is enough to say that the orientation of the planning body in the various states ranges from almost no orientation at all to highly structured orientation periods covering almost every conceivable relevant subject.

We propose structured orientation periods for regional planning bodies be scheduled. A variety of techniques should be employed to provide the planning body with the required orientation. Some of these presentation techniques and material are as follows:

*A wide variety of printed materials to include plans for previous years as well as excerpts from such plans.

*Computer printouts to include data summaries and program projections.

*Government publications of several types, to include appropriate issues of the Federal Register and Public Laws.

*A sample plan format with an examination of the rationale for the various parts of the format.

*Significant items developed for projection in overhead transparency form, frequently accompanied by handout duplicates of the displayed material.

*Developmental flow of the plan or any other such material which can be displayed in linear form drawn on flip charts or displayed by projection techniques.

*Sound augmented slide programs of a wide variety of types and subject matters.

*Sound augmented slide programs of a wide variety of types and subject matters.

*Subject matter experts in such areas as data processing, job market analysis, adult education, and the like, making formal or informal presentation to the planning body.

*Informational packets of a wide variety to be taken back to parent organizations for examination and study there.

These are only some of the ways in which planning body members can get the required orientation. The techniques employed are not nearly as important as the type and quality of the material presented in such orientation periods. It is important to remember that it is a rare circumstance, indeed, when a planning body member had had previous experience in a task similar to the one about to be undertaken, that is, planning for vocational education.

PROVIDING INPUT TO THE PLANNING BODY

During its deliberations in the planning year, the planning body will become deeply involved in gathering and using data and information will be both qualitative and quantitative, and much of it will be in forms requiring interpretation if it is to be of value in the planning process. It is a reasonable assumption that many of the planning body members will have had limited experience in the interpretation and use of such data and information; consequently, it becomes the responsibility of the staff of planning region representatives to supply the data and information in forms that will be meaningful to the planning body membership.

The following are only some of the subject areas about which data and information input to the planning body must be supplied in forms that make sense to the regional planning body membership:

*Grant amounts
*Funding formulae
*Needs assessment
*Program evaluation
*Program accountability
*Vocational education delivery systems
*Demographics
*Program enrollments
*Program and personnel development
*Vocational guidance
*Resource planning
*Special needs
*Program goals

There are so many subject areas, in fact, about which data and information will be needed by the planning body--and these subject areas vary widely from state agency to state agency, that it makes little sense to attempt to identify all such subject areas here. Instead, permit us to examine certain features of the manner in which input is made will have a great deal to do with whether or not the planning body is able to carry out its state mandate.

First, it should be a basic assumption that decisions of all types are a consequence of the processing of input data and information, and it is axiomatic that the quality of the decision-making process depends equally upon the quality of the input and the quality of the input processing. This applies to the minor decisions we make every day of our lives, and it applies to those decisions made on a grand scale by world and national leaders. If either half of the decision-making process is inferior, then the quality of the resulting decisions will be inferior.

The vocational education planning body should be by virtue of a state mandated role, essentially an input processing entity. While it has no one to depend upon by itself for the quality of its input processing, it must depend upon other sources for the quality of the data and information it processes. These data and information sources are many and varied--and may differ from region to region, but the input from all such sources can be classified as any one of three principal types, as follows:

*The agency input brought to the planning body by each of the organizational representatives serving on the planning body. Typically, this input is derived from and relates to only a single, clearly identifiable organization or interest group.

*The input accumulated by the planning body as a direct consequence of soliciting input from the general public in public hearings. This input could come from almost any conceivable source and relate to an individual, an agency, or an interest group of almost any size.

*The input supplied to the planning body by representatives of the state agencies. This input will almost invariably be of a type and quality that is unavailable from any other source, because numerous agencies within state government devote full time to the gathering of data and information.

The input derived from all of these principal sources will be both qualitative and quantitative. Some of it will be in forms which can be of immediate benefit to the decision-making process, but parts of it will be in forms requiring further processing and interpretation if it is to be of value to the planning body.

Whatever its source, though, and whatever its form and its content, there is another basic assumption that needs to be made concerning all such input:

It will be advocacy data and information.

It is difficult to imagine any input to the vocational education planning body which does not, in some way, advance, support, or defend a position of some agency or interest group. While this should be quite obvious concerning input supplied by an agency representative serving as a member of the planning body, and while it should be equally obvious concerning input supplied by representatives of the general public or interest groups within the general public, it might not be quite as obvious concerning input furnished by representatives of the general public or interest groups within the general public, it might not be quite as obvious concerning input furnished by representatives of the region. It is undeniably true, however, that representatives of each organization are advocates of that organization's position and philosophy, and it is equally true that this position and philosophy will be the most powerful forces at work in all deliberations of the vocational education planning body. None of this is intended to imply that such advocacy on the part of any data and information source is improper.

V. PROCEDURES FOR PLANNING ON A REGIONAL BASIS

A. Demographics

An analysis of the demographic and economic characteristics of Regional Planning prepares providers with the necessary data needed for the identification of priority occupations, a foundation by which technical assistance can be built, and for the implementation of the processes involved in Regional Planning/Articulation. The statistical study will show the size and distribution of Region X in relationship to population and employment.

(Handout V - A)

The appropriate place to begin a demographic profile is with a review of the literature. This review will help in determining the state-of-the-art for Regional Planning and Articulation of Vocational/Technical Education and Training. It will also help in the identification of the providers with the region, the description of the population served, and types of programs made available by each provider.

There are many sources available to help in determining the specific demographics of the region. Handout V - A gives a list of thirteen sources that provide data needed in demographic analysis. Along with this list, other organizations may be contacted to contribute to the literature on Regional Planning/Articulation.

LITERATURE REVIEW ON DATA COLLECTION
FOR
REGIONAL PLANNING/ARTICULATION

I. Title: Area Occupational Demand Forecast, 1985
Source: Texas Employment Commission
Description: Standard Metropolitan Service Area
Contents: (1) Industry
(2) Annual Average Employment, 1978/1985

II. Title: County Business Patterns - Texas
Source: Census
Description: Employees, Payroll, and Establishments, by Industry
Contents: (1) Industry
(2) Number of employees for week
(3) Payroll: First Quarter and Annual
(4) Number of establishments, by employment-size class

III. Title: 1984-86 Job Training Partnership Act Plan
Source: North Central Texas Council of Governments
Description: Service Delivery Area
Contents: (1) Description and Analysis of the S.D.A.
(2) Geographical Description
(3) Population Analysis
(4) Labor Market Analysis
(5) Occupational Profiles
(6) Program Systems
(7) Participant Planning and Budget Forms
(8) Administrative Assurances
(9) Employment Service Plan
(10) Coordination Action to Accomplish State and Local Objectives
(11) Summer Youth Employment and Training Program

IV. Title: County Profiles
Source: North Central Texas Council of Governments
Description: Service Delivery Area
Contents: (1) Employment by Industry with County
(2) Employment by Occupation

V. Title: Texas Job Outlook 1990
Employment by Industry and Occupation
Source: Texas Employment Commission
Description: State
Contents: (1) Employment by Industry
(2) Employment by Occupation
(3) Job Openings by Occupation

VI. Title: Texas Employment Commission
A Labor Market Information System
Source: Job Training Partnership Act
Description: State
Contents: (1) Labor Market Information and Program
(2) Description and Characteristics of Population
(3) Employment Developments by Industry
(4) Labor Supply and Demand

VII. Title: North Central Texas SDA Planning Information
Source: Texas Employment Commission
Description: North Central Texas Service Delivery Area
Contents: (1) Population Trends by County
(2) Labor Force Trends
(3) Employment by Occupation

VIII. Title: Texas Occupational Demand Forecast, 1985
Source: Texas Employment Commission
Description: State
Contents: (1) Employment by Occupation
(2) Employment by Industry
(3) Projected Occupations with OES Dictionary Codes

IX. Title: Texoma SDA Planning Information
Source: Texas Employment Commission
Description: Texoma Service Delivery Area
Contents: (1) Population Trends by County
(2) Labor Force Trends
(3) Employment by Occupation

X. Title: Covered by Employment and Wages
By Industry and County
Source: Texas Employment Commission
Description: Industry and County Employment and Wages
Contents: (1) States summary: Employment and Total Payrolls by Industry
(2) County DATA: Employment and Total Payrolls by Industry
(3) Average Monthly Federal Covered Employment
(4) Average Weekly Wages of Workers in Covered Employment by Counties

XI. Title: Selected Tables from STF3 for JPTA Planning Purposes
Source: JPTA
Description: County
Contents: (1) Race, Age, Sex
(2) School Enrollment
(3) Labor Force
(4) Class of Workers
(5) Poverty STATS

XII. Title: Texas Labor Market Reviews
Source: TEC
Description: SMSA
Contents: (1) Total Industry Nonagricultural Wage and Salary Employment
(2) Texas Nonagricultural Wage and Salary Estimates
(3) Civilian Labor Force Estimates by SMSA

XIII. Title: Affirmative Action Data
Source: TEC
Secription: Census by County (Dallas)
Census by SMSA (Sherman-Dennison)
(Dallas-Fort Worth)
Contents: (1) Population, Labor Force, Employment, Unemployment
(2) Summary Occupations by Sex and Race
(3) Population and Housing Characteristics
(4) Population, Labor Force, and Income Characteristics

These organizations include: the Office of Vocational and Adult Education of the U. S. Department of Education, the National Center for Research in Vocational Education, the Employment and Training Division of the U. S. Department of Labor, and the Texas Department of Mental Health and Retardation.

Before analyzing the Regional Planning Area, it is important to note three trends that affect future employment opportunities. First is the trend of population growth. By 1990, the population of this country is expected to increase to 244 million. Continued growth will mean more people to provide with goods and services causing greater demand for workers in many occupations. The second trend is based on age structure. Due to the "baby boom," the number of young people in the population has been high in recent years. Through the 1980's, when these young adults start to enter the prime work years, the size of the population between the ages of 25 to 44 will swell. By 1990, nearly one-third of the population will be in this age group. The final trend that affects future employment opportunities is looked at in terms of regional differences. National trends in population may not be the same as changes in a particular region. The population swing to the South and West will result in over half the population living in these areas by

(Transparency V - I)

1990. This includes the Region X area. Such geographic shifts in the population will alter the demand for and supply of workers in the local job markets. In areas with growing populations, Region X being a prime example, demand for all types of services will increase.

With these trends in mind, and their affects on our overall society, an analysis of the region area can be developed. This analysis will be in terms of the demographic and economic characteristics of the eight counties that make up the Region X Area.

The demographic and economic characteristics of Region X reveal a positive employment picture. One of the primary reasons for such an outlook is based upon the ever-increasing population of the state. Census figures indicate that the Texas population increased by some 27 percent between 1970 and 1980. Much of this growth has been brought about by migration into the state because of its environment, employment opportunities and greater industrialization. There is a continuing interaction between increased population, and industrialization both with the state and in the Region X area.

Region X, the designated area of the project, is made up of eight counties. These counties consist of Grayson, Collin, Dallas, Ellis, Kaufman, Rockwall, Hunt, and Fannin. The Region X

(Handout V - B)

DEMOGRAPHIC PROFILE

Counties	Population Trends 1980	Population Trends 1985	Labor Force 1984	1984 Unemployment Rate Number	1984 Unemployment Rate Percentage	Number of I.S.D.	Post Secondary Institutions	Post Secondary Enroll	Post Secondary Comp	Secondary Enroll	Secondary Comp
Collin	144,576	177,175	99,384	2,887	2.9	13				2,068	1,013
Ellis	59,743	73,214	39,147	1,663	4.2	10				949	728
Hunt	55,248	67,705	28,535	1,941	6.8	10				543	279
Kaufman	39,015	47,812	26,297	928	3.5	7				563	347
Rockwall	14,528	17,804	10,268	252	2.5	2				197	144
Fannin	24,285	26,027	9,823	575	5.9	9				315	138
Grayson	89,796	96,238	42,446	2,259	5.3	12	1	1,107	264	883	530
Dallas	1,556,390	1,742,015	1,021,665	37,261	3.6	14	7	8,982	1,146	11,139	5,979
8 counties	1,983,581	2,247,990	1,277,565	46,936	34.7	77	8 campuses	10,089	1,410	16,657	9,158

area is a prime example to use for this project in that it contains urban, suburban, and rural areas. The population of this area is in the midst of rapid growth and development. The number of people moving into this region accounts for a large portion of the state's growth. Within the Region X area, there are 77 independent school districts that offer vocational education, two community colleges with a total of 8 campuses, one community-based organization, and 46 proprietary schools.

To assess the demographic and economic makeup of Region X, data has been gathered on a county basis. Data collected on each county in terms of population trends, employment, and labor force estimates is presented in the Handout labeled Demographic Profile.

The population trend data is based on Service Delivery Area (SDA) statistics. In 1980, the population for Region X was 1,983,581. The 1985 population trend totals 2,247,990. The difference in the population trends of the Region X definitely shows that this eight county area is one of rapid growth.

(Transparency V - 1)

In 1984, according to county data provided by the Texas Employment Commission, the Labor Force total was 1,277,565

Descriptive information on the Region X planning area indicates that it is one of the largest regions in the state in terms of population and income. This is due to the influx of people within the Dallas-Fort Worth metropolitan area where about 95 percent of the residents in the region either work or live. The largest sources of earnings in the region are agriculture, manufactoring, services, and retail trade, followed by wholesale trade and transportation. The above data, based on the 1984 County Profiles and SDA information, gives an account of unemployment for eight counties in Region X. Opportunities for employment in these counties are most likely to be found in the growth industry sectors.

The demographic data used in Regional Planning is also concerned with the programs and recipients on the Secondary, Post-secondary, and Adult Levels; as well as those involved in vocational education programs for the handicapped and disadvantaged. Proprietary Schools and Community Based Organizations (C.B.O.) are also vital components within the demographics of the region.

(Transparency V - 2)

The labor market consists of people and jobs and the interactions between them. Knowledge about these two elements and their relationships may be categorized by the term labor market information (LMI). In Regional Planning, it is important to establish a linkage between labor market information, occupational education and job training information. This type of data is needed by vocational educators and job training planners to relate current and projected training needs to occupational education and job training information. This type of data is needed by vocational educators and job training planners to relate current and projected training needs to occupational education, training programs, and services. This information is representative of conclusions that can be drawn from data that is referred to as supply and demand data.

SUPPLY DATA include facts and figures concerning current and projected population, labor force (employment and unemployment) status, educational attainment, and income levels. Supply data are generally disaggregated by population characteristics such as sex, age, race, and marital status. Sometimes special characteristics are of interest, particularly, barriers to employment, such as disability status. Net in-migration data also describe supply-side characteristics. Supply data generally provide information about INDIVIDUAL PEOPLE.

DEMAND DATA address current and projected employment within industry and occupation categories. These data address layoffs, voluntary separations and new hires, plant openings and closings, and salaries, wages, and benefits. Such data help identify where the jobs are and where openings are likely to occur. Demand data usually provide information about JOBS, OCCUPATIONS, or INDUSTRIES.

Supply data characterize the current and potential workforce while demand data describe the existing and expected employment outlook. Both types of data must be considered in geographic terms, where international, national, state, regional, and local economic and demographic characteristics and trends need to be examined by policy-makers.

The type and application of labor market information are functions of a particular user group and its specific data needs. State as well as local POLICY-MAKERS need reliable data on the employment problems and opportunities within local labor markets. Employment and training PROGRAM MANAGERS need accurate data on persons in need, as well as on jobs where hiring can be expected to take place. EDUCATORS need timely data on expected supply and the projected demand for particular skills. EMPLOYERS need data on wages and the potential supply of a trained work force. ECONOMIC DEVELOPMENT PLANNERS need to describe potential workforce and economic conditions to attract prospective new industries and businesses. At the more personal level of an

Individual Job Seeker, .. effective counseling, training, job search and successful placement depend upon a practical knowledge of available jobs and skills that are marketable. In the absence of relevant information, each of these important decisions can be uninformed, with results left largely to chance.

Handout V - C labeled Potential Supply ± Potential Opportunity = Training Needs, gives an example of how cross-walk data can be obtained to report the training needs of a particular area. The example given is based on data from the Sherman-Denison SMSA (Grayson County).

To begin the cross-walk, data has to be drawn from certain sources and agencies. The following sources and agencies provided information for the Training Needs Table.

1. Texas Employment Commission; AREA OCCUPATIONAL DEMAND FORECAST 1985, Information received is based on Employment by Occupation for 1978, Projections to 1985, with annual average job openings for the Sherman-Denison SMSA.

2. Texas Education Agency; Program Enrollments and completers for secondary, post-secondary, and adults in Grayson County. Information is based on the 1982-83 school year.

3. National Occupational Information Coordinating Committee; VOCATIONAL PREPARATION AND OCCUPATIONS, Third Edition. Volume 1, Educational and Occupational Code Crosswalk. Information is based on links between educational and occupational classification structures that are in current use.

HANDOUT V - C

SHERMAN-DENISON SMSA
(Grayson County)

Potential Supply ± Potential Opportunities = Training Needs

CIP Number and Program Title

	DOT Code	Immi-gration	1982-83 Secondary Post Secondary and Adult Enrollments	Potential Supply (Completers)	T.E.C. Cluster Title or O.E.S. Code	Potential Opportunity	Trainin Needs
07.0700	Typing General Office and Related Programs				Typists	15	
07.0701	Typing General Office and Related Programs, General		43	38	Typists		
07.0701	Typing						
	Typing Section Chief 203.737-014		1	1	61396		
	Braille Typist 203.582-014				61392		
	Typist 203.582-066				61392		
07.0799	Typing, General Office, and Related Programs, Other		46	14	Typists		
	TOTALS		90	53		15	38 ov

CIP Number and Program Title	DOT Code	Immi-gration	1982-83 Secondary Post Secondary and Adult Enrollments	Potential Supply (Completers)	T.E.C. Cluster Title or O.E.S. Code	Potential Opportunity	Trainin Needs
07.0700	Secretarial and Related Programs, General		26	4	Secretaries	75	
07.0606	Secretarial						
	Social Secretary 201.162-010		1	1	61368		
	Secretary 201.362-030						
07.0608	Word Processing						
	Magnetic-Tape Type-writer Operator 203.582-034		1	1	61392		
	Perforator Typist 203.582-038				61392		
	Photocomposition Keyboard Operator 203.582-034				55T12		
	TOTALS		28	6		75	71

4. Academic Achievement Record provided by the Texas Education Agency; Bulletin 742. Provides information on T.E.A. codes.

5. Texas Employment Commission; TEXAS OCCUPATIONAL DEMAND FORECAST 1985 Information provides O.E.S. dictionary codes for the state of Texas.

(Handout V - C)

As shown in Handout V-C data is compiled and distributed under the appropriate classifications. Column 1 gives the Classification of Instructional Programs (CIP) by number and Program Title. Under each Program Title is listed the DOT or Dictionary of Occupational Title.

Column 2, labeled O.E.S. Code, gives the corresponding Occupational Employment Statistic for each occupational title. The O.E.S. Code shows the number given to the occupation by the Texas Employment Commission. This classification can also be found in the source, VOCATIONAL PREPARATION AND OCCUPATIONS (V.P.O.). It should be noted that the brackets in column 2 of Handout V-C denote a cluster a specific occupations under the same O.E.S. Code.

T.E.A. Code labels the third column of this table. This code is taken from the Texas Education Agency Record Code, Bulletin 742. The code describes the specific occupation in relationship to the D.O.T. and O.E.S. Codes. Bulletin 742 does not list a code for each specific occupation shown in V - G However it is noteworthy that the example, T.E.A. Code 11671013, is cross-walked with the O.E.S. Code 61900, which relates to more than one specific occupation.

The column 1982-83 Enrollments gives a breakdown for Secondary, Post-secondary, and Adult Enrollments. Enrollments for each of these classifications should be listed in relationship to the corresponding occupation. Handout V-G only shows a total under the Secondary classification due to the fact that the data reported for the enrollments of Grayson County did not reveal a specific enrollment for the specific occupations listed. One should note that the same is true for Immigration and Completer Totals. For a more accurate picture in relation to training needs, a specific breakdown of enrollment and completers would be needed. Potential Supply, column 5, is based on Immigration and Completer totals for Grayson County during the 1982-83 school year. The number of Immigrants and Completers is also given in relationship to the specific occupation and its corresponding codes. Potential supply is based on a cumulative total between Immigrations andompleters.

(Handout V - G)

Potential Opportunity is based on the Occupational Demand for Grayson County. This is found in the AREA OCCUPATIONAL AND DEMAND FORECAST 1985, provided by the Texas Employment

Commission. Occupations of like description based on the O.E.S. are clustered together to give the potential opportunity of the described occupation(s). Totals for potential opportunity in the specific cluster are found in the sixth column.

Training needs are based upon the differences between the Potential Supply (Immigration and Completers) and the Potential Opportunity of a specific occupation. If the training needs of a particular occupation are +, then the training needs are few, for the occupation is over training for that specific skill. If the training needs of a particular occupation are -, then there are needs for people to be trained in that occupation.

The primary purpose of a cross-walk, as explained and illustrated in Handout V - C is to analyze the demand for workers in an occupation in relation to the supply of trained labor. The interrelationships shown among the occupational classification systems facilitate the use of VPO data to prepare information on the relationships between a potential supply, potential opportunity, and training needs.

(Handout V - C)

There are, however, limitations to such a cross-walk approach in finding training needs. A general limitation is that different agencies collect and compile information in different ways, for different purposes, using different classification systems. The specific limitations to this procedure are as follows:

1. The listing of occupations on the Sherman-Denison SMSA by T.E.C. show only those occupations with 50 or more employed.
2. The SMSA listing for Sherman-Denison lists some occupations under a program title.
3. The occupations listed on the SMSA are general, therefore making the DOT listings difficult in terms of their specificity.
4. The T.E.A. information for Grayson County enrollment and completers for the 1982-83 school year lists all programs; the Occupational Demand Forecast excludes agricultural employment.
5. The Occupational Demand Forecast clusters occupations differently than the D.O.T. in terms of areas described.
6. Many of the O.E.S. Codes that fall under the specific Program Title are clustered occupations. This would seem to show that there is an overlapping of training, meaning that the same training is given for different occupations.
7. Based on the reporting technique, it is hard to discern to what O.E.S. the Potential Supply corresponds.
8. T.E.A. Codes are not listed for all D.O.T. and O.E.S. Codes for a complete cross-walk.
9. Bulletin 742, T.E.A. Codes, are clustered under the C.I.P. number and not reported for all specific occupations in reference to the D.O.T. and O.E.S. Codes.
10. Eleven of the occupations described under the D.O.T. Title are not listed in the 1985 TEXAS OCCUPATIONAL DEMAND FORECAST under any O.E.S. Dictionary Code.

At the secondary level, Region X is served by 77 independent school districts that offer vocational education. The listing on Handout V - D describes the program areas and the number of programs offered with their total enrollments and completers.

(Handout V - D)

In Region X, instruction was conducted in all eight program areas during the 1982-83 school year. Within these eight program areas, there were 353 instructional programs provided for secondary level students, with an enrollment total of 16,657. Of the enrollment, 9,350 students were completers during the 1982-83 school year.

At the postsecondary level, the region is served by two community colleges with a total of eight campuses. The colleges and their campuses are listed on Handout V - E, along with their vocational/technical education enrollment, completers and number of program areas offered.

(Handout V - E)

The following information provides a general overview of the vocational education and capability with planning Region X. At the postsecondary level, the major systems involved in providing vocational/occupational education and training include the Dallas County Community College District and Grayson County College. Through the combined efforts of these postsecondary level programs, approximately 19,000 persons received training in the 1982-83 year with nearly 1,250 completers.

Thirty-six facilities of the Texas Department of Mental Health/Mental Retardation serve the Region X planning area. Dallas County, being the largest of the eight counties in Region X, has 25 facilities. The remaining 11 are spread throughout the Region.

The TDMHMR community programs include the following vocational services (Handout V - F), along with the number of facilities that offer those services.

(Handout V - F)

The list included in Handout V - F is served by 29 TDMHMR directors and 2 facility specialists.

INDEPENDENT SCHOOL DISTRICTS
Region X

Program Area	No. of Programs	Enrollment	Completers
Agriculture & Agribusiness	136	2,138	1,193
Business & Office	134.5	2,894	1,877
Marketing & Distribution	92.5	3,163	1,859
Allied Health	39.75	742	432
Consumer & Homemaking Educ.	286.5	13	12
Occupational Home Economics Education	99.5	2,796	1,575
Technical Education	9	94	35
Trade & Industrial	443.50	4,818	2,367
Total	1241.25	16,657	9,350

DALLAS COUNTY COMMUNITY COLLEGE DISTRICT (7 Campuses)

College	No. of Program Areas	Enrollment	Completers
Brookhaven	10	583	53
Cedar Valley	8	519	43
Eastfield	15	1,569	173
El Centro	22	2,509	381
Mountain View	12	951	106
North Lake	13	984	81
Richland	10	1,272	147

GRAYSON COUNTY COLLEGE (1 Campus)

College	No. of Program Areas	Enrollment	Completers
Grayson	22	1,107	264
Total	102	18,988	1,248

HANDOUT V - F

TDMHR SERVICES AND FACILITIES

Services	No. of Facilities
Vocational Evaluation - Level I	9
Vocational Evaluation - Level II	3
Skills Training - Level I	3

The following is a list of disabled groups that are included in the Region X area. These groups are followed by the number of facilities serving these particular groups.

Group	Number	Group	Number
Communication Disorders	2	Neuro-Muscular	1
Neurological Disorders	1	Orthopedic	1
Burns	1	Cord Injuries	1
Head Injuries	1	Mentally Retarded	11
Visually Impaired	1	Mentally Ill	1
Physically Handicapped	1	Emotional	1
Social	1	Alcoholic	6
Drug Abuse	2	Public Offenders	1
Mentally Restored	1	All Physical & Mental Disabilities	8
Disabilities Except Severe Emotional	1		

Handout V - G gives an example of the instructional Programs being conducted in Region X during the 1982-83 school year. The Worksheet shows enrollments and completers in these programs by Post Secondary, Secondary and Adult users. (Handout V - G)

The column labeled PROGRAM lists the vocational instructional area followed by a list of the identifiable program(s) offered. A vocational instructional program is identified by the six-digit instructional program code, referred to as a C.I.P. Code or Classification of Instructional Programs. (Transparency V - 3)

The columns under Enrollments and Completers are subdivided by the type of student. A POST SECONDARY STUDENT is a person who is enrolled in a vocational instructional program identified by the six-digit CIP instructional code for which credit is given toward as associate degree. Persons who are pursuing a certificate or license, rather than an associate degree, even though they may be concurrently receiving credit toward an associate degree, shall be classified as adults. A SECONDARY STUDENT is a person in grades 6-12 (pursuing a high school diploma) who is enrolled in a vocational instructional program, or who is served through other vocational programs, services, or activities. An ADULT is a person 16 years of age or older who is enrolled

1982-83

Program	Enrollments				Completers			
	Post Sec.	Sec.	Adult	Total	Post Sec.	Sec.	Adult	Total
Agribusiness and Agricultural Production								
01			620	620				
01.01 Agricultural Business and Management								
01.0101		2		2		2		2
01.0104		10		10		5		5
01.0199		7		7		6		6
01.02 Agricultural Mechanics								
01.0201		296	10	306		205	10	215
01.0202		2	4	6		2	4	6
01.0203		26		26		15		15
01.0204		57		57		35		35
01.0205		9	6	15		8	6	14
01.0206			3	3			3	3
01.0299		3		3		2		2
01.03 [illegible]icultural Production								
01.0301		1,159		1,159		604		604
01.0302		118		118		18		18
01.0303		29		29		31		31
01.0304		32		32		26		26
01.0399		4		4		2		2
01.04 Agricultural Products and Processing								
01.0401		16		16		7		7
01.0402		31		31		19		19
01.0499		6		6		6		6
01.05 Agricultural Services and Supplies								
01.0501		31		31		22		22
01.0502		11		11		11		11
01.0503		28		28		22		22
01.0504		7		7		8		8
01.0505		8		8		3		3
01.0506		1		1		1		1
01.0599		14		14		7		7

BEST COPY AVAILABLE

in a vocational instructional program, which does not lead to a high school diploma nor to a post secondary associate degree. This includes persons who are pursuing a certificate or a license, but not an associate degree, even though they may be receiving credit concurrently toward an associate degree.

Columns designated TOTAL in V -G show the number of students enrolled and completers of the coded program. The worksheet shows that during the year 1982-83, there were 369 instructional programs offered by providers in the eight county area that makes up Region X. The total enrollment for all vocational programs in the Region was 89,282. The total number of persons completing vocational programs during 1982-83 in Region X was 10,709. A COMPLETER is defined as a student who finished the planned sequence of courses, services, or activities designed to meet a vocational occupational objective that taught entry-level job skills. These students have met all the requirements of the institution for program completion, regardless of whether or not he or she graduated from the institution. In cases where there are no totals in the completer column, yet that program shows an enrollment total, it would be fair to assume that the program is new. New program completers are reported within one or two years, depending upon

(Handout V -G)

the length of the program.

Under the section entitled ENROLLMENTS there may be as few as 1 person enrolled for a particular vocational course of instruction. Where this is reported, it would be appropriate to consider that the program coded is cooperative instruction and only one student of the local provider is training in that specific occupation.

According to the worksheet, the largest instructional program area in regards to total enrollment is under the CIP code 07, which is designated as Business and Office. Enrollment for this area during the 1982-83 school year was 33,031. The smallest program area in Region X during the 1982-83 school year was under the CIP code program area 03, Renewable Natural Resources, which had an enrollment of 12.

As for completers during the 1982-83 school year, the largest instructional program area was CIP code 07, Business and office which had a completer total of 2,162. The smallest completer total was 11 under CIP code 03, Renewable Natural Resources.

The total vocational education programs of the Region are components in the educational process which includes vocational training in the secondary schools, postsecondary institutions and adult education community. The programs listed and discussed provide basic learning skills in technical, vocational, and managerial areas.

DETERMINING TRAINING NEEDS OF PRIORITY OCCUPATIONS

Vocational education has had numerous roles to play in the American society. Two of the most important roles are that of enhancing the supply of trained workers to business, industry, and government and satisfying the job training needs of a variety of populations. These two roles were emphasized by the passage of the Vocational Education Act of 1963 specifying that persons of all ages in all communities . . . will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of an actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training. (P.L. 88-210: Part A, Section 1).

Some vocational educators still seem ambivalent concerning the requirement of documented labor market information in the planning, application, and approval of vocational instructional (job training) programs.

The mandate for using labor market information (supply-demand) for planning, approving, and evaluating vocational instructional programs at the state and local levels has been continued in the Carl D. Perkins Vocational Act of 1984, HB 72 of the 2nd Called

Session of the 68th Texas Legislature, and Rules of the State Board of Education.

In review of local applications for approval of vocational program units, House Bill 72 has specified that priority shall be given to requests for vocational programs specifically identified on a list of priority occupations approved by the State Board of Education. The state board shall annually update the priority list for use by school districts in planning vocational programs (Section 1., Part H, HB 72, 68th Legislature). There are some vocational educators who would interpret this mandate to mean any program proposed for implementation at the local level for any occupation listed as a priority occupation by the State Board of Education would be approved when requested in the annual application. This interpretation would be incorrect. The demographic and economic data of the Region served by the school may show that the priority occupations, in term of employment opportunities, for the region are different from those of the state. Also, rules of the State Board of Education require that the approval of an application for a vocational program unit be considered in the light of the assessed needs of the community as evidenced by a community labor market survey and other appropriate labor market or needs assessment information. At the local level, under the Sunset Provisions of the State board of Education for vocational education programs, the opportunities for employment in occupations, for which the program is being conducted, will be considered for justification of continuing the program unit approval.

Due to the requirements for the use of labor market information for both the initial program approval and approval for continuing, it is essential that the training needs of the labor market area (region) served by the job training provider be assessed at least every five years.

Identifying the characteristics of the Region has established a base for carrying out the specified functions and objectives of the Regional Planning/Articulation unit. The process (assessment) of identifying the characteristics of the Region has also identified potential barriers to the collection of accurate and timely data.

Planning programs for job training must begin with the identification of occupations for which there is the greatest need for training. Since a primary purpose of the R P/A unit is to provide technical assistance to local providers in the planning of vocational education programs, priority occupations within the Region will be identified by the Regional Technical Advisory Committee and office staff. The model for are reported (10) and return to A. If the potential opportunities do not justify a training program within the Region, an assessment of training programs outside the Region is made (11). The fundings are disseminated (12) and a return is made to A.

Off-page connectors on Figure 3 are displayed to show how the data obtained about the priority occupations can be used by each training provider within the region as shown in Figure 4. Figure 4 shows how the information obtained in Figure 3 can be used for use of the local providers (public schools, community colleges, community-based organizations, and proprietary schools) in planning, conducting, evaluating and reporting job training programs. (handout V - i)

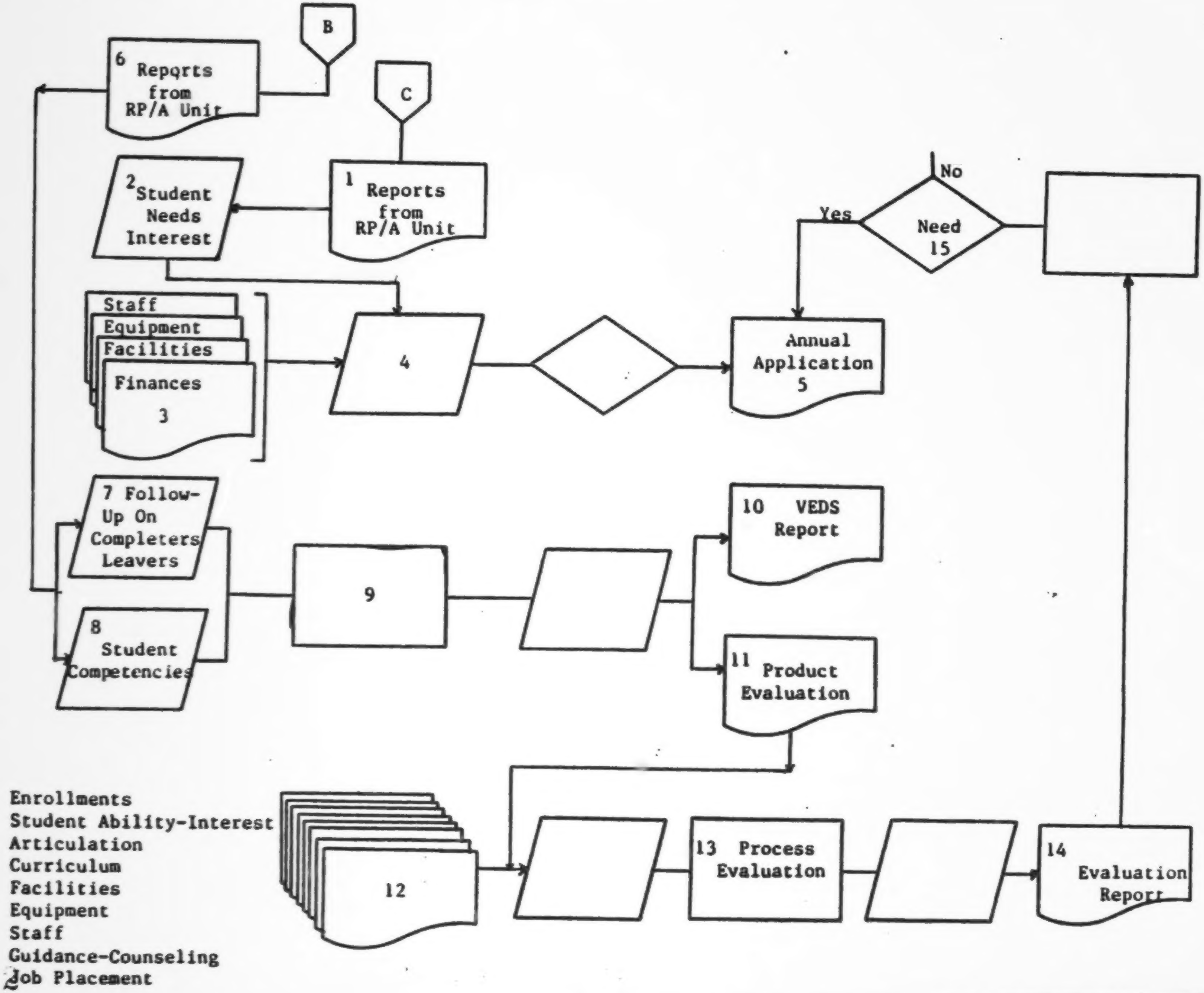
If it has been found that the potential employment opportunities are greater than the assessed potential supply (1), then each interested provider should assess the training interests and needs of its students (2). Currently, with the assessment of student needs and interests, the local providers should look at its current capabilities of training for the priority occupation (3). The analysis of this data (4), is completed and if the decision to offer training is yes, then the data is included in the annual application (5). If the employment opportunities are less or equal to the

Regional coverage of priority occupations developed by the Research Triangle Institute in 1982 for the Texas Education Agency has been adapted for use in identifying the priority occupations by the Regional Planning/Articulation units. The adapted model is presented in Figures 3 and 4.

(handout V - H)

Figure 3 graphically presents a sequence of steps of the model. Step (1) involves the selection of one of the priority occupations identified at the state level and which also has a great number of employment opportunities as shown by the characteristics of the Region. Step (2) compares the potential employment opportunities with potential completers of training programs. (3) If the potential supply (completers) is equivalent to the potential employment opportunities, this information will be reported to each of the providers within the Region and return to A. If the potential employment opportunities are less than the supply, then (4) check for excess training, duplication, and competition. Regardless of the decision, (5), no (7), or yes, (6), the findings are compiled (7) and reported (8) and the process returns to A. If the potential opportunities are greater than the supply, then the process will determine if the opportunities are great enough to justify training (10). If yes, the findings

DATA FLOW AT LOCAL LEVEL



HANDOUT V - 1

potential supply (6), the local provider can use the data with other data such as follup-up (7) and assessment of student competencies (8) for its VED's report (10) and product evaluation (11). The results of the product evaluation and an assessment of the total program (12) provides information for process evaluation (13). The data obtained by process evaluation and compared with criteria established by State Board Policies, Federal and State mandates, and local policies will result in a self-evaluation report (14). The results of the evaluation report are analyzed for program needs (15) and used with data from (4) for the annual application (5).

DETERMINING NEED FOR JOB TRAINING

The best way to determine the need of job training is graphically illustrated below.

Potential Employment Opportunities ± Potential Supply = Need For Training

Write this equation on chalk board or flip chart.
Give examples of each part of equation.

Due to a great number of uncontrollable variables, the exact determination of employment opportunities cannot be made. Therefore, in the following narrative, when the terms employment opportunities or labor market needs are used, they are used in reference to projected potential employment opportunities. For years, the Texas Employment Commission has attempted, with the Bureau of Labor Statistics, to make as accurate as possible, projections of labor market needs by occupation for each of the Standard Metropolitan Statistical Areas (SMSA's) in Texas.

The importance of occupational information for planning of job training was emphasized and supported by federal vocational legislation which created and funded State Occupational Information committees in each of the states.

The Texas State Job Training Coordinating Council for the Joint Training and Partnership Act in Texas, has provided leadership in the development of a State Plan for Labor Market Information (LMI). It is anticipated that with implementation of the state plan for LMI, that projected employment opportunities information will be reported in a way which will be of more use to the vocational program planner. Presently, projected labor market needs, by occupation, are available from the Texas Employment Commission for each SMSA.

For those providers who are not located in a SMSA, employment opportunities can be identified by community surveys. A procedure of conducting community surveys, developed and once used by the Department of Occupational Education and Technology of the Texas Education Agency, is to supplement the projected labor market need provided by the Texas Employment Commission (TEC).

The staff of the Regional Technical Assistance unit will provide technical assistance in conducting community surveys when needed. It will be the responsibility of the TAR staff to compile by occupation, all projected employment opportunity data collected from TEC, TSOICC, TDCA, and the Community Surveys. This compiled data must then be compared with the potential supply of the job training providers (completers) and with the projected immigrants for each of the priority occupations. The projected immigrant supply will be obtained from TEC. Technical assistance to representatives of local providers for conducting community surveys will be done, basically, through the process of inservice training at the TAR unit field office.

Open the topic for discussion among participants.
Use questions to prompt discussion.

The data obtained for the priority occupations within the Region, which is disseminated to the local providers, will also be sent to the planning staff of the State Board for Vocational Education. This data from each of the Regional units can be used by the state staff in developing the master plan, identifying state priority occupations, approval of programs requested by local providers, and compiling Federal and State reports. Also, this data can be used in determining priorities for support services and technical assistance to local providers.

Determining the occupations for which there is the greatest need for training (priority occupations) is done by first identifying the projected labor market need for employees in specific occupation(s). The determination of projected employment needs of occupations in a geographical area can be done by reviewing the current Texas Occupational Demand Forecast of a Standard Metropolitan Statistical Area (SMSA) and/or by conducting community surveys. The data for the Texas Occupational Demand Forecast, published by the Texas Employment Commission, are developed through the State and Area Projection Program, which utilizes Texas Employment Statistics (OES) Survey data, Texas industry employment estimates and Texas Census data. In most cases, the SMSA is the smallest sub-state area for which data for the Texas Occupational Demand Forecast is collected and reported. An example of the occupational demand forecast for an SMSA is presented in Table 5.

(handout V - 5)

A review of Table 5 reveals that, based on the average total demand for new employees for each listed occupation, there is not a sufficient yearly demand to justify a vocational/technical or job training program in the majority of occupations listed.

Based on the average enrollments of a training program (20-40), it has been found that the average number of program completers available for employment ranges from 10 to 20 individuals. Using the total numbers of projected demand by occupation each year from Table 5, it may appear that only one vocational/technical or job training program is needed in the Sherman-Denison SMSA, for only 22 of the more than 100 occupations requring less than a bachelors degree, listed in Table 4. Based on the Table 4 data, and with a strict interpretation of supply and demand, it may appear that only 12 of the occupations requiring less than a college degree and at least 1 year of training, would justify two or more job training programs for each of the 12 respective occupations. If a conclusion was made that there

73

is a lack of need for job training programs based on the data from Table 5, the conclusion would be in error. The explanation of why the conclusion would be an error is presented in the discussion of clustering occupations for instructional purposes.

The community survey may also be used as a sole source of identifying the employment needs of the labor market.

The community survey may also be used to supplement the occupational demand data reported by the Texas Employment Commission.

(handout V - K)

An example of a community survey is presented in Appendix A. The community survey provides a vehicle for collecting important information about the needs of the employing community that is not reported in the Texas Occupational Demand Forecast. The community survey can be designed to obtain information from employers essential to planning job training programs. This essential information for planning job training programs includes, but is not limited to:

a. The desire for individuals to be prepared with entry level skills and knowledge for employment;

b. The need for individuals to be prepared with core (basic) skills and knowledge for full-time employment and training conducted by the employer;

c. The needs of employers for supplemental training to upgrade present employees;

d. The need for supplemental training of apprentices; and

e. Input from employers related to the improvement of curriculum of job training programs.

Community surveys should be conducted every five years. The staff of the R P/A units would provide technical assistance to local providers in organizing and conducting the community surveys. The staff and the TAC would be responsible for compiling, analyzing, and reporting the data using the process of identifying priority occupations. The community surveys should be completed in the Region six months prior to the "Sunset Act" reviews (SBOE Policies) and reviews for reestablishment of approval status (H.B. 72) of vocational/technical education programs of the public schools within the Region.

IDENTIFICATION OF THE TRAINING REQUIREMENTS FOR PRIORITY OCCUPATIONS

After the priority occupations of the Region have been identified, the next greatest need of the majority of local providers for technical assistance from the R P/A units is the identification of the training requirements of each of the priority occupations of the Region. The training requirements of an occupation are determined by the identification of the human (job) performance requirements, equipment, and the environment in which the occupation will be performed. The human or job performance requirements are determined by occupational analysis which will result in the identification of the specific competencies and performance standards (level of competency) required to perform each assignment (job) of the occupation.

The staff and the TAC of the R P/A unit will provide technical assistance to the local providers of job training programs within the Region using the system presented in Figure 8.

DETERMINING TRAINING REQUIREMENTS

After the priority occupations of the Region have been identified by the TAR unit, then additional studies of the occupations are performed to determine the training requirements of the occupation and the training needs of the employers. In far too many cases in the past, job training programs have been planned only based on occupational demand (opportunity) data. Far too little consideration has been given to desires and training requirement needs of the employer in planning job training programs.

If a community survey has not been used in identifying the priority occupations, then the next step in determining the training requirements will be a survey of BIG who employ individuals in the priority occupations. This

This survey will determine the needs for training individuals for: (A) entry level employment; (B) employment below entry level but prepared for entry into an employer's on-the-job training (OJT) program; or (C) upgrading in their present places of employment ① .

The next step ② in determining the training requirements is the creation and use of an occupational committee. The occupational committee membership will consist of incumbent workers and supervisors of the occupation being analyzed. The occupational committee, through a series of meetings, will identify the competencies required to perform all of the jobs in that occupation ③ . Next ④ , the committee will translate the identified competencies into competency and knowledge statements. ⑤ The competency and knowledge statements of the occupation will be disseminated to each of the local providers within the Region for use in planning programs they desire to conduct or update, other TAR units, and state planning staffs of vocational/technical education, JTPA programs, and other state agencies responsible for job training programs.

(handout V - L)

PLANNING THE TRAINING PROGRAM

Figure 9 presents a series of steps for use of local providers in planning job training

(handout V - M)

programs using the competency statements and/or knowledge statements identified by the occupational committees of the TAR unit. The first step ① performed by the local provider would be to determine the specific purpose of the training program. If the purpose of instruction is to prepare individuals for entry level job skill ② in a secondary school, then the local school, working with a local craft committee, would match the essential elements prescribed by TEA with the identified required competencies of the occupation ⑤ . The next sequential steps for the purpose of training or instruction are steps 8, 9 and 10.

Prior to the identification of occupational competencies within a Region, staff of the TAR units should meet with staff of the State Board for vocational education to compare priority occupations of each Region with the priority occupations of the state. To avoid duplication of effort of competency identification by each Region, by mutual agreement, each Region should identify competencies of different state priority occupations common to all Regions. The list of competencies for priority occupations developed by each Region could then be shared with the state staff and each of the other Regions. The identified competencies will be essential to planning and conducting training programs at the local level, developing and implementing articulation plans and agreements, and evaluation of training programs at the state and local levels.

CLUSTERING OCCUPATIONS FOR TRAINING PURPOSES

The Sherman-Denison SMSA projected employment opportunities (demand) was used earlier as an example for identifying priority occupations for determining need for job training programs. It has previously been determined that there is a need of 10 or more employment opportunities per year to justify a job training program in a designated area. Since training is needed for the occupations having less than 10 employment opportunities, it is permissible (by funding sources) and appropriate to cluster occupations for training purposes.

The VOCATIONAL PREPARATION AND OCCUPATIONS (VPO), third edition, published by the National Occupational Information Coordinating Committee, 1982, is very useful in clustering occupations for training purposes. The VPO links the Department of Education vocational program categories CLASSIFICATION OF INSTRUCTIONAL PROGRAMS (CIP) to the occupations in the DICTIONARY OF OCCUPATIONAL TITLES (DOT), the Standard Occupational Classification (SOC), the 1980 Census Occupational Classification and to the Occupational Employment Statistics (OES) survey and industry-occupations employment matrix codes. An example of how these linkages are reported is presented in Table 4.

Refer to
handout V - J

The average job openings of the

Sherman-Denison SMSA previously presented in Table 4 shows an average of 5 job openings for each of the following occupations: (1) welders and flamecutters, (2) welders and flamecutters--A, and (3) welders and flamecutters--C. A review of Table 4 reveals that the training program (CIP 48.0508) may be conducted for preparation of individuals with entry level skills in any one or all three of the occupations being discussed. It is also permissible to cluster a number of other occupations for training purposes under other programs listed by the CLASSIFICATION OF INSTRUCTIONAL PROGRAMS. The key to this clustering procedure is that the instructional content of the courses within the program be derived from an analysis of each occupation which is clustered for the program.

It will be the responsibility of the Technical Assistance Region staff to provide technical assistance to the local schools in the clustering of the occupations. It will also be the responsibility of the TAR unit to inform the local providers of the need changes of the occupations within each program. It may be determined, based on occupational employment opportunities, that a specific occupation should be removed from an on-going instructional program and replaced with another occupation that has been listed in the VPO under the specific vocational instructional program.

CLUSTERING OF OCCUPATIONS IN DEVELOPING VOCATIONAL PROGRAMS

It has previously been determined that there is a need of ten or more employment opportunities per year to justify a job training program for a specific occupation in a designated geographic area. Since training is needed for the occupations having less than ten employment opportunities, it is permissible (by funding sources) and appropriate to cluster related occupations for training programs.

The Texas State Board of Education has by Rule defined a vocational program unit as "a single instructional unit, to which a full-time or a part-time vocational teacher is assigned, composed of courses designed to provide instruction in either a single occupational objective or in a related cluster of occupational objectives." In the planning of vocational instructional programs, the above definition means that a vocational program is composed of courses designed to provide instructions in a single occupation or in a cluster of related occupations.

Since there are times when it is not economically feasible to develop and implement a vocational instructional program for a single occupation using a laboratory as a mode of instruction, a local school district may desire to cluster a number of related occupations into a vocational instructional program.

The identification of related occupations for which there is a need for training appears to require a great deal of research and time for the vocational instructional program planner. The job of identifying the related clusters can be made relatively simple by the use of the document VOCATIONAL PREPARATION AND OCCUPATIONS, published by the National Occupational Information Coordinating Committee.

VOCATIONAL PREPARATION AND OCCUPATIONS (VPO) was designed to assist persons having a need to compare and use information obtained under various classification systems. It links or cross-references the Department of Education vocational program categories in the new CLASSIFICATION OF INDUSTRIAL PROGRAMS^ (CIP) with the occupations in the DICTIONARY OF OCCUPATIONAL TITLES (DOT), the STANDARD OCCUPATIONAL CLASSIFICATIONS (SOC), and the OCCUPATIONAL EMPLOYMENT STATISTICS (OES) survey and industry-occupation employment matrix codes. Each of these classification systems has a unique scheme for defining and organizing occupations, and the VPO permits comparison and cross-referencing among the different systems for a given occupational category.

The VPO actually consists of three volumes:

(1) the first volume contains occupational codes, code relationships, crosswalk tables, titles, and descriptors FOR OCCUPATIONS WITH AN ASSIGNED RELATIONSHIP TO A DEPARTMENT OF EDUCATION VOCATIONAL EDUCATION PROGRAM CODE. (2) The second volume contains a complete reference for each of the occupations contained in Volume 1. (3) The third volume is a computer tape presenting CROSS-REFERENCES FOR A MORE COMPREHENSIVE LIST OF OCCUPATIONAL TITLES.

Planners of vocational instructional programs need accurate, up-to-date occupational information to make reasonable decisions about program objectives and content. Similarly, educators and administrators across the country need reliable data on the labor market for effective planning and counseling. Vocational education and employeemnt and training programs must have accurate information if they are to supply trained workers for available job opportunities.

Over the years, federal and state programs have generated enormous amounts of occupational information. Unfortunately, the information is not available from a single source, nor is it produced in compatible formats. Adding to the problem, occupations, industries, and educational programs are classified in a variety of ways by the federal agencies that collect and disseminate the data. They code the information using a number of classification systems, e.g., the DOT, SOC, SIC, as discussed earlier. As a result, the data generated from the different agency collection programs have often proven difficult to integrate and compare.

One of the tasks of the National Occupational Information Coordinating Committee (NOICC) has been to develop a bridge or "crosswalk" among the data classification systems used by the various agencies for their data collection programs. This crosswalk has resulted in the development of the VPO.

Since the late 1960's, there have been efforts to construct crosswalks among classifications. In 1968, both the U.S. Office of Education (USOE) and the Bureau of Labor Statistics (BLS) produced crosswalks among occupational classifications and educational program taxonomies.

As changes occurred and new classifications were implemented, the original crosswalks needed modification and updating. The National Occupational Information Coordinating Committee had a need to accomplish this task. A comprehensive national classification crosswalk was essential to NOICC's mission to establish an Occupational Information System (OIS) based on standard definitions and methods. NOICC published an interim edition of the VPO in 1979. A third edition has just been published.

The VPO is a "crosswalk" or bridge between the instructional program workplace. It defines the relationship between education and work by matching vocational programs in the new taxonomy, A Classification Instructional Programs (CIP), with occupations in the DICTIONARY OF OCCUPATIONAL TITLES (DOT), and other major occupational classifications. It provides a tool for organizing and interpreting data available from many sources at the Federal, state and local level. VOCATIONAL PREPARATION AND OCCUPATIONS explains these classifications:

A Classification of Instructional Programs (CIP)

DICTIONARY OF OCCUPATIONAL TITLES (DOT), Fourth Edition
- Data, People, Things
- General Education Development (GEO)
- Specific Vocational Preparation (SVP)
- Physical Demands and Working Conditions

1980 STANDARD OCCUPATIONAL CLASSIFICATIONS (SOC)

Occupational Employment Statistics Survey and Matrix (OES)

1980 Census Occupational Classification System

STANDARD INDUSTRIAL CLASSIFICATIONS (SIC)

The VPO is more than a bridge. It is a series of products and services. The following sections breifly describe each of these.

Format of the Third Edition VPO, Volume 1, Crosswalk Tables

Volume 1 of the VPO was designed principally for vocational education planners and counselors. It contains crosswalk tables for some 570 vocational education programs. The tables contain CIP or instructional program information followed by related occupational information. Before continuing this explanation, take time to examine Handout V - N. This is an example of one of the VPO crosswalk tables. As you inspect this example, please note that the table is divided into two parts. The upper third of the table represents the world of education, in terms of a single instruction program, "Heavy Equipment Maintenance and Repair." The lower two-thirds of the table represents the work world that is related to the instructional program. In a sense, the crosswalk represents the relationship between education and work. The work world in this case, is expressed in terms of five occupational classifications and four types of occupational characteristics. While you are examining the example crosswalk table, also note that each item of information has been numbered. You can use these numbers to reference back to the example table as you read the following explanation for the numbered items.

(Handout V - N)

①

PROGRAM: 47.0302 HEAVY EQUIPMENT MAINTENANCE AND REPAIR.

② AN INSTRUCTIONAL PROGRAM THAT PREPARES INDIVIDUALS IN THE FIELD MAINTENANCE OF HEAVY EQUIPMENT, AND IN GENERAL MAINTENANCE AND OVERHAUL OF SUCH EQUIPMENT. INCLUDES INSTRUCTION IN INSPECTION, MAINTENANCE, AND REPAIR OF TRACKS, WHEELS, BRAKES, OPERATING CONTROLS, PNEUMATIC AND HYDRAULIC SYSTEMS, ELECTRICAL CIRCUITRY, ENGINES, AND IN TECHNIQUES OF WELDING AND BRAZING.

DICTIONARY OF OCCUPATIONAL TITLES FOURTH EDITION CODE	TITLE	GED R	GED M	GED L	SVP	PHYSICAL DEMANDS	WORKING CONDITIONS	OTHER C I P PROGRAM	1980 SOC CODE	O E S SURVEY CODE	MATRIX CODE	1980 CENSUS CODE
184.167-170	SUPERINTENDENT, MAINTENANCE	4	4	3	7	S56	I		1342	19000	20061699	019
221.367-030	LOCOMOTIVE LUBRICATING-SYSTEMS CLERK	3	2	3	5	S45	I		4752	62003	40062400	363
620.261-022	CONSTRUCTION-EQUIPMENT MECHANIC	3	3	3	7	M346	B57		6117	51034	50081803	516
620.281-042	LOGGING-EQUIPMENT MECHANIC	4	3	3	7	V23456	B56		6117	51034	50081803	516
620.281-046	MAINTENANCE MECHANIC	4	3	3	7	M34	I56	47.0604	6111	51008	50081001	505
620.281-050	MECHANIC, INDUSTRIAL TRUCK	4	3	3	7	M345	I	47.0605	6112	51034	50081803	507
620.281-058	TRACTOR MECHANIC	4	3	3	7	M346	I4	01.0204 47.0605	6112	51034	50081803	507
620.381-018	MECHANICAL-UNIT REPAIRER	4	3	3	7	M456	B		6117	51008	50081001	516
620.381-022	REPAIRER, HEAVY	3	2	3	6	H46	I5		6111	51008	50081001	505
620.664-010	CONSTRUCTION-EQUIPMENT-MECHANIC HELPER	2	1	2	3	M346	B56		8632	56900	80002823	864
622.381-014	CAR REPAIRER	4	3	3	7	H23456	B56		6117	51066	50082803	516
622.381-018	CAR REPAIRER, PULLMAN	4	3	3	7	M2346	B		6117	51066	50082803	516
622.381-022	CAR-REPAIRER APPRENTICE	4	3	3	7	H23456	B56		6117	51066	50082803	516
622.684-010	AIR-COMPRESSOR MECHANIC	3	3	3	6	L46	I	47.0401	6117	51066	50082803	516
910.367-010	BRAKE COUPLER, ROAD FREIGHT	3	2	3	4	M2346	B6		8233	55A29	62001600	825
910.384-010	TANK-CAR INSPECTOR	3	2	3	4	M2346	O6		8280	51066	50082803	689
910.387-014	RAILROAD-CAR INSPECTOR	3	2	3	5	L346	O		8280	55B58	50142202	689
915.687-018	LUBRICATION SERVICER	2	1	1	4	M34	I		8730	55D67	61082605	885

③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

ITEMS 1 AND 2

These two items pertain to the Classification of Instructional Programs, an educational taxonomy, used by the National Center for Educational Statistics (NCES). The CIP was designed to address problems NCES had in collecting and analyzing information about the national status of education.

The CIP is constructed on a three-level hierarchical structure that features a more detailed division of the hierarchy. For instance, the first two digits of the CIP are used to designate a summary of a group of instructional programs that have similar or related objectives and substantive instructional content. The four-digit code represents a group of instructional programs, whereas all six-digit codes represent single programs contained within the four-digit code.

The structure of the CIP permits a uniform method to be applied in the aggregation or summary of data collected using the six-digit code. Using this feature, the detailed data about student enrollments, completions, etc., collected about a single program (six-digit level) from a local school or college can be uniformly combined with the data from other educational institutions within the state, aggregated to form an information resource needed for policy decisions.

Planners can use the instructional program concept as defined by the CIP descriptor (2) to perceptualize the overall program objective, for which individual courses may be developed for the preparation of individuals to obtain employment on specific occupations.

ITEMS 3 TO 7

Items 3 through 7 pertain to the fourth edition of the DICTIONARY OF OCCUPATIONAL TITLES (DOT). These DOT references provide powerful tools for counselors to use in helping students to prepare for work in selected occupations or for making decisions about which occupation they may want to select.

Item 3 is the listing of the nine-digit code and title for each occupation associated with the particular CIP (instructional program). Either the DOT code or title may be used for locating the occupational description in the DOT. This is where the process of clustering related occupations into a vocational instructional program really begins.

Columns 4, 5, 6, and 7 in Figure 1 contain occupational characteristics codes. Occupational characteristics codes are assigned by analysts researching the occupation according to the concepts and techniques specified in the HANDBOOK FOR ANALYZING JOBS

Properly understood by the vocational program planner, they can provide much information needed in planning programs and the development of curriculum. These characteristics codes reflect information on required academic proficiencies, training time, and the physical and environmental conditions associated with the occupations assigned to the instructional program.

Items 3 and 4 indicate training time, i.e., the amount of general education development and specific vocational preparation required of a worker in order to acquire the knowledge and abilities necessary for an average performance in a particular job-worker situation. The codes in column 3 designate the three components of General Education Development (GED), Reasoning (R), Mathematics (M), and Language (L).

Column 4 is the Specific Vocational Preparation (SVP) scale. This scale indicates the amount of time required for a person to learn the techniques, acquire the background information, and develop the facility needed to become an average worker. The correct interpretation of the SVP must assume that the person has acquired the academic skills indicated by the companion GED codes.

Columns 6 and 7 represent two more occupational characteristics codes that should be of significant use to the counselors.

The workers performance and job satisfaction in a job is often related to his/her ability to work under certain conditions.

The Physical Demand codes (column 6) and the Working Conditions codes (column 7) are designed to describe certain environmental and physical exertion conditions associated with a particular occupation. As part of the career decision process, a client should be aware of these conditions.

ITEM 8 - "Other CIP Program"

The six digit codes listed in the "Other CIP Program," column 8, indicates that the DOT codes opposite them in column 3 have also been assigned to them. For example, note on Handout IV. C-1, the crosswalk table for 47.0302 Heavy Equipment Maintenance and Repair has five CIP codes listed in column 8. Now locate in column 3, DOT code and title 620.281-058 Tractor Mechanic. Now read across to column 8 and note that CIP code 47.0605 is listed there. This means that Tractor Mechanic, in addition to being assigned to CIP 47.0302 Heavy Equipment Maintenance and Repair, is also assigned to CIP code 47.0605. Approximately 15 percent of the DOT codes contained in the VPO have multiple CIP assignments.

ITEMS 9 TO 12

(Handout V - O)

Items 9 through 12 on Handout V - O show the relationship of four classification system

PROGRAM: 10.0102 MOTION PICTURE TECHNOLOGY.

AN INSTRUCTIONAL PROGRAM THAT PREPARES INDIVIDUALS TO SUPPORT CINEMATOGRAPHERS OR DIRECTORS IN THE MOTION PICTURE INDUSTRY. INCLUDES INSTRUCTION IN EQUIPMENT, PROCESSES, AND PROCEDURES USED IN PRODUCING MOTION PICTURES; COMPONENTS AND SYSTEMS OF DEVICES FOR PHOTOGRAPHY, LIGHTING, SET DESIGN, AND SOUND RECORDING; AND RECORDING AND RE-RECORDING SOUND AND SPECIAL EFFECTS.

DICTIONARY OF OCCUPATIONAL TITLES FOURTH EDITION CODE	TITLE	GED R	GED M	GED L	SVP	PHYSICAL DEMANDS	WORKING CONDITIONS	OTHER C I P PROGRAM	1980 SOC CODE	O E S SURVEY CODE	MATRIX CODE	1980 CENSUS CODE
194.262-018	SOUND MIXER	4	4	3	7	S45	I	10.0104	3719	32015	10080801	216
194.362-014	RERECORDING MIXER	4	4	4	7	S456	I	10.0104	3719	32015	10080801	216
194.381-010	TECHNICAL TESTING ENGINEER	4	4	3	6	L46	I		3711	55B92	10080806	213
714.131-010	SUPERVISOR, MOTION-PICTURE EQUIPMENT	4	4	4	8	L456	I	06.2001 10.0104	7100	55B29	50040003	633
960.132-010	CHIEF PROJECTIONIST	4	2	3	8	S56	I		7100	55B29	50040003	633
960.362-010	MOTION-PICTURE PROJECTIONIST	4	2	2	6	L46	I		7479	55C40	50142800	773
962.134-010	RECORDIST, CHIEF	4	3	4	7	L456	I	10.0104	7100	55B29	50040003	633
962.137-014	SUPERVISING FILM EDITOR	5	3	5	8	S56	I	10.0104	7100	55B29	50040003	633
962.137-022	SUPERVISOR, PROP-MAKING	4	4	3	8	L56	B		7100	55B29	50040003	633
962.137-026	SUPERVISOR, PROPERTIES	4	3	4	8	L56	I		7100	55B29	50040003	633
962.162-010	DIRECTOR, TECHNICAL	5	2	4	8	L456	I	10.0104	1341	25483	10243802	019
962.167-010	MANAGER, SOUND EFFECTS	5	4	5	7	S5	I	10.0104	3719	32015	10080801	216
962.264-010	EDITOR, FILM	5	2	4	8	S46	I	10.0103 10.0104	3312	25440	10221202	195
962.267-010	SIGHT-EFFECTS SPECIALIST	4	3	3	8	L456	I		3990	32018	10081815	235
962.362-010	COMMUNICATIONS TECHNICIAN	4	2	3	7	L456	B	10.0101	3990	39000	10141404	235
962.362-014	LIGHT TECHNICIAN	4	2	3	7	L46	I	10.0104	3990	32018	10081815	235
962.382-010	RECORDIST	3	2	2	6	L45	B		3990	32015	10080801	235
962.382-014	SOUND CUTTER	4	3	4	6	S45	I		3719	32015	10080801	216

PROGRAM: 10.0103 PHOTOGRAPHIC TECHNOLOGY.

AN INSTRUCTIONAL PROGRAM THAT PREPARES INDIVIDUALS AS HIGHLY SKILLED PHOTOGRAPHIC TECHNICIANS. INCLUDES INSTRUCTION IN BASIC AND APPLIED PHYSICS AND CHEMISTRY, WITH THE SUPPORTING MATHEMATICS OF PHOTOGRAPHIC PROCESS; LIGHT, OPTICS, AND OPTICAL SYSTEMS OF BLACK-AND-WHITE AND COLOR PHOTOGRAPHY; THE SCIENCE, DESIGN, AND FUNCTION OF CAMERAS, AND RELATED DEVICES SUCH AS LIGHT METERS; SOURCE AND APPLICATIONS OF SPECIAL PHOTOGRAPHIC LIGHT; SYSTEM OR MECHANISMS FOR STILL PHOTOGRAPHY, MOVING PICTURES, PHOTOGRAPHIC COMPOSITION, PORTRAIT PHOTOGRAPHY, AND MEDICAL PHOTOGRAPHY; TECHNIQUES FOR TAKING, DEVELOPING, AND MOUNTING STILL PICTURES; AND TECHNIQUES FOR CUTTING, SPLICING, AND MODIFYING MOVING-PICTURE FILMS.

DICTIONARY OF OCCUPATIONAL TITLES FOURTH EDITION CODE	TITLE	GED R	GED M	GED L	SVP	PHYSICAL DEMANDS	WORKING CONDITIONS	OTHER C I P PROGRAM	1980 SOC CODE	O E S SURVEY CODE	MATRIX CODE	1980 CENSUS CODE
029.280-010	PHOTO-OPTICS TECHNICIAN	5	4	3	6	L46	I		3890	33900	10081899	225
143.382-010	CAMERA OPERATOR, ANIMATION	4	3	3	6	L46	I	48.0204	3260	25299	10221801	189
962.264-010	EDITOR, FILM	5	2	4	8	S46	I	10.0102 10.0104	3312	25440	10221202	195
976.131-010	LABORATORY CHIEF	4	2	3	8	L456	I		7100	55B29	50040003	633
976.131-014	SUPERVISOR, FILM PROCESSING	4	3	3	7	L46	I	06.2001	7100	55B29	50040003	633
976.131-022	SUPERVISOR, QUALITY CONTROL	4	3	3	7	L456	I	06.2001	6700	55B29	50040003	633
976.134-010	SUPERVISOR, CUTTING AND SPLICING	4	2	3	6	L456	I	06.2001	7100	55B29	50040003	633
976.137-010	PHOTOGRAPHIC SUPERVISOR	4	2	3	7	L56	I	06.2001	7100	55B29	50040003	633
976.381-010	FILM LABORATORY TECHNICIAN 1	4	4	4	7	L46	I	48.0207	6868	39000	10141404	774
976.382-010	CAMERA OPERATOR, TITLE	4	3	3	7	L4	I	48.0207	7671	52900	61084400	774

codes (SOC, OES Survey, OES Matrix, and Census) to the DOT codes. The SOC code may be used by your counselors to organize and describe occupations found in your state. The OES or Census codes may be the keys to using occupational projections for determining training needs.

Now that we have covered a general description of the VPO, we should see specifically how it can be used in clustering occupations for a vocational instructional program.

Based on your training needs assessment, data obtained from the Texas Employment Commission and/or local community occupational surveys, you have determined by the process of supply ± opportunities, that none of the occupations in the field of business and office have a need for training (10 or more in each occupation). However, we do find there is an annual need for the training of 5 secretaries, 8 receptionists, 5 general office clerks, and 8 typists in the labor market area served by your school.

Demonstrate by use of chalk board

The training needs by employment opportunities do not justify a vocational instructional program for any of these four specific occupations. The VPO is a very valuable resource for clustering occupations for planning vocational instructional programs by use of the

OES codes. What is the OES or Occupational Employment Statistics code? The Occupational Employment Statistics (OES) program is a Federal-State cooperative program designed to produce national, state and area data on current and projected occupational employment for use in planning vocational education and training programs and in career guidance. It provides a consistent conceptual and methodological approach to the development of State and local data by the State Employment Security agencies in cooperation with the Bureau of Labor Statistics and the Employment and Training Administration. The Bureau of Labor Statistics develops the national OES data. The OES program has been adopted by NOICC as the standard principal source for current and projected occupational employment data for use in an occupational information system.

In most States and for the Nation, information on current occupational employment is from the Occupational Employment Statistics (OES) survey of employers and from an industry-occupation matrix system based on the OES survey. The OES survey and the matrix are described below.

THE OES SURVEY

The OES survey collects data on current employment by occupation and industry for non-farm wage and salary workers. The survey is a Federal-State cooperative program begun in 1970; as of the spring of 1982, the District of Columbia and all States except California, Rhode Island and Vermont were conducting the survey. The survey provides data for approximately 1,700 occupations by detailed industry category for the Nation, State and a limited number of Standard Metropolitan Statistical Areas. Several states are beginning to implement methods of producing sub-state area data from Statewide survey files.

The OES survey operates on a three-year cycle, with each year's survey covering a different sector of the economy. The OES survey occupations included in this edition of the VPO are from three regular OES surveys: the 1979 survey of wholesale and retail trade, transportation except railroads, communications and public utilities; the 1980 survey of manufacturing industries and hospitals; and the 1981 survey of State and local government and nonmanufacturing industries not included in the 1979 survey. In addition to these regular surveys, this edition includes code from the 1976 survey of railroads, the 1978 survey of education and codes for Federal government workers.

Taken together, the OES surveys listed above provide data for all wage and salary workers in the nonagricultural sectors of the economy. The

OES survey program does not provide data on workers in the agriculture, forestry and fishing industries, or on the self-employed, unpaid family workers or private household workers. Research is presently underway to expand the OES survey to cover the agriculture sector.

The OES survey uses a questionnaire containing a list of occupations specially designed for each industry or for a group of industries being surveyed that, in general, employ the same kinds of occupations in all categories, e.g., professional, clerical, etc. The survey collects data for a specific reference week, typically in the spring of the year. Questionnaires are mailed to a randomly selected sample of employers. The sample of employers is distributed (stratified) according to the employer's industry and level of employment; all large employers are included in this sample. Telephone follow-ups and personal interviews are conducted with those employers whose responses are considered critical. Estimates of current occupational employment are generally produced for industry and employment size categories similar to those used in the sample. These estimates are then adjusted to the level of total employment in the State or area being observed.

Each occupational category in the OES survey is assigned a unique title, definition and five-digit code. The five-digit coding system for the OES survey occupational categories is structured into major and minor groups. The major and minor groups to which an occupation belongs are represented in the first, second and sometimes the third digits of the code. The first digit identifies the major group, i.e., 10000 is Managers and Officers, 20000 is Professional Workers, etc. The second and third digits identify intermediate and minor groups, i.e., 22000 is Natural and Mathematical Scientists and 22100 is Mathematical Scientists. Office clerical occupations are listed under code 61000. Codes are generally numerical, although some alphanumeric codes are used. A full list of the major and minor groups codes is presented in HANDOUT V - P.

(Handout V - P)

Handout V - P

- 10000 Managers and Officers
  - (19000 All Other Managers and Officers)
- 20000 Professional Workers
  - 21000 Engineers
    - (21900 All Other Engineers)
  - 22000 Natural and Mathematical Scientists
    - 22100 Mathematical Scientists
      - (22199 All Other Mathematical Scientists)
    - 22200 Physical Scientists
      - (22299 All Other Physical Scientists)
    - 22300 Life Scientists
      - (22399 All Other Life Scientists)
    - 23000 Social Scientists
      - (23900 All Other Social Scientists)
    - 24000 Systems Analysts
    - 25000 Other Professional
      - 25100 Teachers
        - (25199 All Other Teachers)
      - 25200 Photographers
        - (25299 All Other Photographers)
      - 25300 to 25500 Miscellaneous Other Professionals
    - (29000 All Other Professional Workers)
- 30000 Technicians
- 31000 Computer Programmers
- 32000 Engineering Technicians
  - (32900 All Other Engineering Technicians)
- 33000 Science Technicians
  - (33900 All Other Science Technicians)
- 34000 Other Technicians
- 35000 Medical and Dental Technologists and Technicians
  - (All Other Medical and Dental Technologists and Technicians)
- 40000 Service Workers
  - 41000 Janitors, Porters and Cleaners
  - 42000 Guards and Doorkeepers
    - (42900 All Other Guards and Doorkeepers)

- 43000 Food Service Workers
    - (43900 All Other Food Service Workers)
- 44000 Other Service Workers

    - 44500 Police/Fire Related Workers

- (49000 All Other Service Workers)

50000 Production, Maintenance, Construction, Repair, Material Handling and Powerplant Workers

- 51000 Mechanics and Repairers
    - (51900 All Other Mechanics and Repairers)
- 52000 Darkroom Workers
    - (52900 All Other Darkroom Workers)
- 53000 Laundry and Drycleaning Occupations
- 54000 Truck Drivers
- 55000, 57000 and 58000 Other Production, Maintenance, Construction, Repair, Material and Powerplant Workers
- 55U00 Assembler
    - (55U99 All Other Assemblers)
    - * Note: The code 55E22 has been used previously for Assemblers
- 56000 Helper, Trades
    - * Note: The code 55887 is used for Helper, Trades when a detailed breakout of Helpers is not used.

- (59001 All Other Skilled Craft and Kindred Workers)
- (59002 All Other Operatives and Semi-skilled Workers)
- (59003 All Other Laborers and Unskilled Workers)

600000 Clerical Occupations

- 61000 Office Clerical Occupations

    - 61100 Office Machine Operators
        - (61199 All Other Office Machine Operators)
    - 61200 to 61400 Other Office Clerical Occupations

    - (619000 All Other Office Clerical Workers)

62000 Plant Clerical Occupations
(62900 All Other Plant Clerical Workers)

70000 Sales Occupations

71000 Sales Representatives
(71900 All Other Sales Agents, Sales Associates, and/or Sales Representatives)
72000 Sales Clerks and Other Sales Related Occupations

(79000 All Other Sales Workers)

RESIDUAL CATEGORIES are shown in parentheses. The appropriate residual for categories, where no residual is shown, is the primary group residual category. For example: The appropriate residual category for codes within the 34 group, Other Technicians, is 39000, All Other Technicians.

Before each year's survey, the occupational categories and questionnaires are reviewed and updated as necessary. The OES survey codes, however, are unique and the scope (coverage) of employment and the related titles and definitions are fixed. New codes are assigned to any occupational category in which the scope of employment is considered to be significantly different from previously used codes. New definitions also are prepared.

The OES SURVEY DICTIONARY available from the Bureau of Labor Statistics or cooperating State Employment Security agencies, is a compendium of all current OES survey occupational titles, definitions and codes. A revised OES survey Dictionary is issued each year to include the most recent changes in the codes, titles and definitions. The Dictionary dated 1981 shows the occupational categories included in this edition of the VPO.

Now that we have a better understanding of the development of the OES codes, let us return to their use in clustering. We had identified four occupations in the field of business and office occupations for which training needs did not justify a program for a specific occupation. The occupations which we identified by OES code were:

Secretary	61368
General Clerk	61353
Receptionist	61361
Typist	61392

Close observation will reveal that these four occupations are related by having a commonality of skills and theory. These occupations can be clustered for the vocational program "Secretarial and Related Programs, General," CIP Code 07.0601 and TEA Code 11670700.

Now that you have identified the occupations for which the vocational instructional program is to be developed or revised, you or the planner would observe the accepted procedures (occupational analysis) of developing the instructional content for each of the occupations included in the program.

REMEMBER, based on the occupational training needs of the labor market area served by your school, the content of the vocational training program could change every five years. There is a possibility, based on the economy, that the changes could occur within a year. For example, if there was a great expansion of business in your area, it is possible that the training needs in any one office occupation could increase by 300 percent. If this were to happen, and you did not change the instructional content of the current program, you could not justify your program in relation to need for training in the labor market area served by your program.

VI. COMMUNICATION SYSTEM

An effective communication system is vital to the success of planned improvement and articulation of vocational/technical education and job training programs. Maximum efforts must be made to inform job training (vocational/technical education and JTPA) providers as to the planning/articulation process, its focus, its findings, recommendations and ultimately the results of the application of the findings and recommendations.

As with all aspects of planning and articulation, the communications system demands expertise that is close to, or interwoven with the planning and articulation processes. This relationship of the communication system to planning and articulation is essential for anticipating and preparing for the steps in the process of informing the job training providers. Opportunities for input from, dissemination to, and feedback from the providers affect the quality of planning at the local, regional, and state levels.

Prior to the 1970's, decisions to be made by occupational education providers were relatively simple in that they consisted primarily of the allocation of resources to the few traditional programs of vocational education and training.

The number of different funding sources and the alternative training have increased so rapidly and the accompanying complexity of available choicremedial basic skills) and supplemental training for those who are presently employed. Additionally, cutting across all of these decisions is the growing responsibility for meeting the occupational preparation needs of the disadvantaged, handicapped, unemployed, and underemployed. These complicated circumstances have increased the need for the communication of information essential to the planning, decision making and articulation processes.

There is a need for more information, and this need increases the complexity of the system. The information must be accurate; it must be current; the information must be available in the form which meets the needs of the user; and it must be available at the time it is needed by the user.

Disseminating and receiving of information are essential ingredients in the process of decision making and leadership for vocational/technical education and job training programs. The need for the exchange of information between and among all entities involved as providers of job training instruction and the ultimate users of trained individuals results from Federal and State requirement and rules and regulations of the State Board for Vocational Education. An example of the need for a comprehensive communications system for all providers of job training programs is presented in Figure 1.

(Handout VI - A)

Figure 1 is only an example of the types of information which will be needed by local providers in planning and articulating vocational/technical education and job training programs governed by new Federal and State legislation.

Systems have been developed and implemented that collect, analyze, and disseminate data essential to planning vocational/technical education and training. And that is exactly what they are - a data system or management information system (MIS). They are not a communication system for for planning. Communication requires a two-way flow of information. In practically all cases, management information systems have provided only for a one direction flow of information in relation to its value by those who collectively provided the information to the MIS for compilation, analysis, and interpretation.

SYSTEM DESIGN

An effective communication system for occupational providers must provide for a two-way flow of information. The communication system must meet the needs of the job training providers at the local level and the planners at the regional and state levels.

Effective and continuous educational planning is dependent on the collection, analysis, and interpretation of data relative to the needs of the populations served and the resources of the providers meeting those needs. Administrators of job training programs have traditionally approached the task of program planning and implementation by obtaining data in a logical and organized manner; that is, systematically. Being systematic, however, is not the same thing as applying a systems approach.

A variety of communication (data) systems have been developed for use in the process of planning, evaluating, and reporting for vocational education programs. However, most of the systems have not been developed with consideration of the provider who needs the information compiled by the system.

(Handout VI - B)

The kinds of data essential to a communication system as presented on the following pages, include both evaluation and assessment data. Analysis of assessment and evaluation data will describe "what is" and identify "what should be." In essence, as shown in Figure 2, we have "discrepancy analysis" which will pinpoint specific areas of needs to be addressed in the planning process.

Independent Information systems of labor market demand, program enrollments, assessment of basic skills, staff, student follow-up, articulation, and others will become subsystems of a comprehensive regional communication system for use in planning vocational education programs and services. Implementation of the communication system will result in more effective and efficient planning, reporting, evaluating, articulation, and collaboration of all entities providing or receiving benefits of occupational training within the region. Activities and results of planning, articulation, and reporting provide feedback to the system. In describing the system, the starting point should begin, as should all planning, with assessment. Assessment would be made to identify existing and projected needs for vocational education. Evaluation would determine to what extent, both qualitatively and quantitatively, existing programs are meeting identified needs.

Assessment data would be obtained by use of subsystems for determining: (1) needs of population to be served; (2) employment opportunities, which is an important factor in identifying training needs; (3) resources of providers; (4) articulation plans; and (5) the need of program improvement and support services necessary for conducting high-quality programs. Evaluation data are provided respectively for each of the data areas of assessment. For example: It can be easily determined quantitatively to what extent population needs are being met by reviewing enrollment data. Enrollment data by programs will show to what extent there is potential supply for projected employment opportunities.

Follow-up data will provide information for both qualitative and quantitative evaluation of vocational programs in relation to the stated objectives of occupational instruction. In addition, follow-up data will identify other beneficial outcomes of vocational instruction. Other beneficial outcomes of vocational education include, but are not limited to: leadership skills, aesthetic development, consumer knowledge, and accomplishment in citizenship. Other data needed for both assessment and evaluation are obtained from vocational personnel files and student files. Follow-up information will be used both in evaluation of programs and in justification for continuing existing programs and for requesting programs in the annual application.

The following are a few examples of how data from each subsystem are related to and used respectively with other subsystems and functions

(Figure 3). In determining the number and types of populations who need and desire vocational education, the system will provide in quantitative terms the needs of persons of Limited English Proficiency, the educationally and economically disadvantaged, persons with handicapping conditions which prevent them from succeeding in regular programs of vocational education without benefit of special services, minorities, women, and those who can succeed in regular programs. Enrollment data will be used to: (1) identify how many of each population is being or should be served, (2) determine priorities for distribution of funds, and (3) determine how many people by population were served by the distribution of allocated funds. (Handout VI - C)

Employment opportunities, both immediate and long-range--will be identified through assessment (Figure 4). The major source of employment data will be obtained from the Texas Employment Commission. These employment opportunity data of the labor market area served by providers within a Region will be matched respectively by occupation with supply data from the same area. The supply data will be determined from enrollments to project the number of persons who will be available for employment in each occupational area by year. Immediate and long-range projections of persons available for employment (Handout VI - D) will be determined by completers and enrollments in each vocational program. Enrollment data by vocational program will be obtained from public secondary schools, post secondary institutions, programs conducted under the Joint Training Partnership Act, and nonprofit private and proprietary institutions and agencies.

Other subsystems of data collection and dissemination under assessment of need for program improvement and support services (Figure 5) include:

Guidance and counseling services which provide supportive activities such as appraisal of occupational aptitudes and abilities, occupational information, education plans for pursuing selected careers placement in vocational programs, job placement, and follow-up.

(Handout VI - E)

Personnel development which identifies type and numbers of personnel needed by program area, the amount and kind of professional improvement or preparation needed by program or activity area, and by specific populations to be served.

A subsystem for assessment of curriculum needs can be implemented. Data from this subsystem may be used both in determining priorities for curriculum development projects, evaluation of existing curriculum materials, articulation between providers, and collaboration among business, industry, government, and vocational education.

Other subsystems which may be developed for program improvement and support services are in the areas of exemplary programs, support services for women, work study, child care services for students enrolled in vocational education, research, activities and projects for overcoming sex bias, and needs of displaced homemakers.

Other data which will be used in planning and articulation consist of local and regional information on financial resources, facilities and equipment, needs of employers, and other demographic data.

The subsystem of follow-up (Figure 6) which is of primary importance to evaluation also provides data for planning, monitoring and reporting. This includes data from and for context, process, and product evaluation. Follow-up data are obtained by interfacing with other subsystems to avoid duplication of reporting. Files from other subsystems used for follow-up data when compiled, preparing follow-up reports for submission to the Texas Education Agency. Data from student followup of program completers and leavers may then be used for developing a school district product index norm for each program area (Figure 7). The project index by program in simple terms is the product of a statistical formula to show the percent of enrollments in specific program areas who have obtained employment as a result of occupational preparation in that program. Comparisons can be made of each provider product index with a respective regional product index. Programs at provider levels showing a substantial lower product index than that of the region norm would indicate a need for closer monitoring or a formal self-study and on-site evaluation.

(Handout VI - F)

(Handout VI - G)

Data from follow-up and other subsystems will be in place and readily available when the school district is requested to conduct a local evaluation in conjunction with the Texas Education Agency.

It can easily be seen, as graphically shown in Figure 8 how data collected and compiled by the various subsystems can be used for planning, articulation and making management decisions at the local level. Assessment and evaluation data are required in order to determine both regional and local priorities, to identify: (1) available resources, (2) other agencies and organizations with which collaboration and articulation must occur, and (3) program approvals.

(Handout VI - H)

Data used for and generated as a result of planning in identifying priorities and resources are used for: (1) developing the local annual program plan for vocational/technical education and training; (2) revising or developing new priorities of the administrative boards; (3) revising administrative procedures and guidelines; (4) establishing and implementing criteria for the new programs and redirection or relocation the distribution of funds and approval of existing programs and projects; (5) articulation; the collaborative identification and use of resources.

Data used in the allocation of resources for approved programs and projects under the planning function are then used in the monitoring responsibility. Monitoring includes, but is not limited to, reviewing of reports of approved programs and projects, making on-site visits for the purpose of qualitative evaluation, and providing leadership or technical assistance. Data collected, compiled, and analyzed in the functions of evaluation, planning, articulation, and monitoring are used in reporting. Data collection, analysis, and reporting (dissemination) provides a two-way flow of information. A two-way flow of information results in communication.

The design of this proposed system provides for the maximum use of data which are presently stored in existing files or available from providers and other agencies and organizations Figures 9 - 13 provide a graphic description of the logical sets of data to be collected and the uses of these data.

(Handout VI - i,
VI - 5, VI - K,
VI - L, VI - M,
and describe

INSTALLATION OF THE COMMUNICATION SYSTEM

The communication system for the Regional Model has been developed to comply with Federal and State requirements of data collection and reporting. Although compliance is important, the basic objective of the communication system is to make needed data readily available to local providers for planning purposes. Achievement of this objective will necessitate the collection and compilation of data on a regional basis. The process of collecting vocational education (job training) data at multiple regional sites has several advantages over centralized data collection and dissemination. These advantages include:

- reduction of a single, large data collection effort into smaller efforts
- enhanced local control with personnel near the data collection points
- reduced time to accomplish the total data collection effort
- data compiled and disseminated according to user needs in a short period of time
- improved accuracy of data
- reduced complexity of administrative control
- increased timely utilization of data by local administrators without loss of centralized reporting capabilities
- the capability of developing profiles on a regional basis by job training needs, high rates of school dropouts, areas of high unemployment, and ethnic composition of population.

Data processing could be performed using stand-alone microcomputer systems. Each region would collect, compile, edit, store, and disseminate its own (local and regional) data. The microcomputer systems offer the same style of interactive processing as an on-line system. One main advantage is that they will not require complex telecommunication software. Regionally collected data could be transmitted to a central computer at the Texas Education Agency using TEXANN or STS. The data could be transmitted by each region at the end of each work-day or work-week.

It is proposed that a microcomputer with a letter quality printer and telephone modem be provided for each of the 24 Technical Assistance Regions. A graphic description of the proposed 24 Technical Assistance Regions is shown in Figure 14. (Handout VI - N)

This design for the communication system may appear to be limited. The examples for which the communication may be used have been primarily for planning of vocational programs at the local level. The design of the system provides the opportunity of the collection and dissemination of additional data for planning and decision making at the state level. The design provides for communication of data related to planning and decision making at the state level in the areas of:

1. Supply and demand for teachers.

2. Certification processes (need and status - especially for personnel obtaining certifications other than by completion of a bachelor's degree).

3. The professional improvement needs of all vocational education personnel.

4. Resources need by local training providers (curriculum guides, instructional materials, support services for program improvement and expansion).

5. Assessment data as required and described in the current Texas State Plan for Vocational Education.

Because of the stand alone capability of each region, the regional planning and technical assistance units could produce accurate, up-to-the- minute reports and/or summaries which are needed by local administrators of vocational education and job training programs.

There would not be any ongoing computer charges, as such, since the systems would be owned. As an additional service to local administrators, custom programming could be developed and installed to allow the computers to support other electronic communications between local providers and the regional planning and technical assistance office.

The use of microcomputer systems is very cost effective as a regional data collection and dissemination technique. They also provide additional services not available with the on-line configuration. A more detailed cost analysis and time analysis will probably show an even larger cost advantage for microcomputers than shown here. Microcomputers do represent a new technology which should be utilized by the Department of Occupational Education and Technology (DOET) by contracting with a vendor who can provide turn key systems which include hardware, software, installation, documentation, and personnel training. The fixed costs of such a turn key product assures DOET a fixed predetermined price and identifies an agent who is totally responsible for any problems.

The location of hardware and staff for the implementation of the communication system is critical to its success. The desired location of hardware and staff would be the placing of a communication system in each of the official state planning regions. This placement is suggested since vocational planning must use employment data. Currently--and there is no indication of change--employment statistics are computed and reported by standard metropolitan statistical areas which are respective to each of the planning regions. Additionally state planning for economic development and related activities are done by the planning regions. It is anticipated that the Department of

Occupational Education and Technology of the Texas Education Agency will soon be providing technical assistance to public schools and community colleges on a regional basis. It is assumed that the designated regions for providing technical assistance will be the same as the state official planning regions.

The communication system would be implemented by each of the regions using the data processing specifications prescribed in the Texas Education Agency Bulletin 742. This process would provide for the collection, processing, and dissemination (communication) of all data essential for vocational education on a regional basis. The communication of the data would be in two directions. The compiled data by region would be sent to each of the eligible recipients for local planning and decision making. Individual school data and compiled data would be submitted electronically by each of the regions to a central processing unit of the Texas Education Agency for further compilation and analysis.

This communication system design, when implemented, will result in the following benefits:

1. For eligible recipients:
   a. The schools will have a more accurate data base for use in planning, conducting, and evaluating vocational education.
   b. The vocational education program will be more responsive to the needs of the labor market.

- c. The reporting requirements of the eligible recipients will be less of a burden.
- d. The reporting of eligible recipients will be more accurate.

2. For the Texas Education Agency:
    - a. Reported data will be more accurate.
    - b. Data will be available when needed for planning and decision making.
    - c. The preparation of the State Plan and Master Plan for vocational education will be more efficient and economical in terms of:
        - . Assessment of the current and projected occupational needs and the current and projected demand for general occupational skills within the states.
        - . Identification of the needs of students, including adults, in order to determine how best to improve student skill levels in light of the State's occupational and skill requirements.
        - . Assessment of the special needs of groups of individuals specified in section 201(b) for access to vocational education and vocational services in terms of labor market needs.
        - . Assessment of the quality of vocational education in terms of -
            - .. the pertinence of programs to the workplace and to new and emerging technologies.
            - .. the responsiveness of programs to the current and projected occupational needs in the State.
            - .. the capacity of programs to facilitate entry into, and participation in vocational education and to ease the school-to-work and secondary-to-postsecondary transition.
            - .. the technological and educational quality of vocational curricula, equipment, personnel, and instructional materials to enable vocational students and instructors to meet the challenges of increased technological demands of the workplace.

and a lack of awareness among students about such provisions.

3. DEFINE INSTRUCTIONAL ARTICULATION. Indicate that articulation can take place between secondary schools, between postsecondary schools, or between secondary schools and postsecondary schools. (Transparency VII - 1) (Transparency VII - 2)

4. DESCRIBE THE MODEL FOR INSTRUCTIONAL ARTICULATION. Indicate that the four components of the model are legislation and policy, coordination, implementation, and evaluation. (Transparency VII - 3)

    a. Lesiglation legislation has mandated articulation of secondary and postsecondary work skills and training. Stress that service deliverers receiving public funds for works skills education and training must utilize core competencies as the basis for assessing program performance.

    b. Coordination. Describe how coordination takes place at the state, regional, and local levels. State the roles and responsibilities of the Joint Advisory Committee for Articulation (JACA), the Regional Articulation Committee (RAC), and the Program Articulation Committee (PAC). (Transparency VII - 4)

    c. Implementation. First, review the procedures the Regional Planning Unit follows in inventorying regional work skills education and training, determining program duplication and competition, and comparing regional demand to training output for priority occupations. Next, discuss what activities constitute interinstitutional cooperation and coordination and how institutions can be surveyed for these data. (Transparency VII - 5)
    Finally, discuss the ten steps for implementing the instructional articulation process. (Transparency VII - 6)
    Be sure to contrast the roles and responsibilities of the Regional Articulation Committee with those of the Program Articulation Committee. Most important, the participants need to understand the six steps of the Dallas model. (Transparency VII - 7)

d. Evaluation. State the roles of the Joint Advisory Committee for Articulation (JACA), Regional Articulation Committee (RAC), and the Program Articulation Committee (PAC) in evaluation. Discuss the process for evaluation. (Transparency VII - 8)
   List criteria which are characteristic of articulated programs. (Handout VII - A)

5. FOCUS ON THE DALLAS MODEL. All participants need to understand how the model works as they may serve on the Program Articulation Committee--which implements the model. (Transparency VII -7 may be used to complement the presentation and the handouts indicated).

   a. Define terms necessary to understand the model. (Handout VII - B)

   b. Teach how a task analysis is conducted. (Handout VII - C)
      Indicate that a task analysis should be done for each priority occupation if one has not been done for two years.

   c. Also state that task analysis are available through state curriculum centers and from the Vocational-Technical Consortium of States (V-TECS) catalogs. (Handout VII - D)

   d. Indicate that once the tasks are stated, blocks, modules, and competencies are defined by the PAC. (Handout VII - E)

   e. Explain that the blocks, modules, and competencies need approval by the Regional Articulation Committee.

   f. Describe how performance objectives are written by the PAC. (Handout VII - F)

   g. State that the last step is the dissemination of printed materials which include--block and course equivalents; a list of blocks, modules, competencies; performance objectives; and a student profile form. (Handout VII - G)

6. DEFINE COLLABORATIVE ARTICULATION. Indicate that this type of articulation is broader than instructional articulation as it involves the cooperation and

130

coordination of entities. These entities are local providers, the regional planning unit, and business, industry, and government (BIG).

7. DESCRIBE THE MODEL FOR COLLABORATIVE ARTICULATION. Indicate that the entities have an equal responsibility in carrying out the objectives of regional planning. Also, the entities should be involved in implementing, evaluating, and reporting job training programs. (Transparency VII - 9)

8. GIVE EXAMPLES OF STRATEGIES FOR COLLABORATION. Indicate that the examples can work in any region if the local factors are taken into account. (Handout VII - H)

9. IDENTIFY RESOURCES FOR ARTICULATION. Both instructional and collaborative articulation resources can include aids for planning, implementing and evaluating articulation processes. Instructional articulation resources should include information about DACUM--a method for identifying which competencies should be in a curriculum. Collaborative articulation resources should include ideas for multiple linkages among business, industry, and government.

10. CLOSE THE WORKSHOP BY EMPHASIZING THE MAJOR ROLES OF THE PARTICIPANTS--
Administrators and Supervisors:
  Participate by cooperating and coordinating articulation processes.
Guidance Personnel:
  Participate by promoting instructional articulation with students and colleagues in other institutions.
Vocational Instructors:
  Participate by serving on the PAC, bt promoting instructional articulation, and by initiating collaborative articulation.

VII. INSERVICE FOR THE ARTICULATION PROCESS

The articulation processes are a part of the Regional Planning/Articulation Model. In order to carry out these processes, participants--administrators and supervisors, guidance personnel, and vocational instructors--will need orientation by the personnel in the Regional Field Office.

STEPS FOR CONDUCTING INSERVICE

Without cooperation and trust, articulation cannot take place. Therefore, these populations need orientation to articulation so that they do not feel threatened by the concept.

The following steps should be undertaken by the Regional Field Office in preparing administrators and supervisors, guidance personnel, and vocational instructors for participation in the articulation processes.

1. ADDRESS ESSENTIAL CHARACTERISTICS OF ARTICULATION. These elements would include: competency-based curricula, a joint vocational advisory committee, ladder-type curricula, an emphasis on faculty, coordination of faculty, a cooperative use of facilities, a willingness to change, and a need for uniformity.

2. DISCUSS BARRIERS TO ARTICULATION. These barriers would include: insufficient facilities, lack of teachers certified to teach high school, lack of interest among secondary schools in contracting, problems with scheduling, no standard evaluation procedures for providing advanced standing for students,

Evaluative Criteria

*Articulation agreements are utilized

*Planning takes place at both institutional levels

*A JACA oversees both horizontal and vertical articulation for the region

*Instruction is competency-based

*Evaluation of student performance is through competency-based standard test items

*A transfer system is available to ensure smooth transition from one school or program to another

*There is schedule flexibility and release time for exchange experiences and joint planning for key staff

*There is a sharing of resources between and among institutions such as facilities, counseling, job placement, and other personnel

*There is joint sponsorship of relevant projects and activities

*There is a continuous progress review and evaluation process

*There is an overall positive commitment to articulation by key personnel

Definition of Terms

The following terms need to be defined for complete understand of the articulation processes:

Blocks--A unit of learning made up of common modules. Example: Modules on offset printing and photocopying would be part of a reprographics block.

Competency--The ability of an individual to perform a certain activity within an occupation. Examples: (1) prepare an offset master, (b) run copies on an offset press, and (c) clean an offset press.

Instructional/Course objective--Represents a clear statement of instructional intent and is written in any form necessary to clarify intent. Example: To be able to transcribe a business letter from a dictating machine in modified block form and be able to produce a typed letter with a minimum of three typing errors, with all typing errors corrected.

Module--A part of the unit of learning. Example: Offset printing would be a module in the reprographics block.

Performance objective--A statement which identifies the task to be performed, the conditions under which it must be performed, and the quality of the performance needed to obtain instructor's approval. Example: Using appropriate tools, timing light, and service manual, time an engine. Timing must meet manufacturer's specifications.

Task--A logical related set of actions required for the complete job element. A job or vocation includes a number of tasks. Example: One of the tasks that must be performed by the auto mechanic is that of changing a tire; all of the steps involved in tire changing make up the complete task.

Sources: Ashe, F. M., et al. USING PERFORMANCE GOALS IMPLEMENTING COMPETENCY-BASED EDUCATION IN COMMUNITY COLLEGES, 1. Blacksburg, Virginia: Virginia Polytechnic Institute and State University, 1980. (ED 195299) and Mager, Robert F., and Kenneth M. Beach, Jr. DEVELOPING VOCATIONAL INSTRUCTION. Belmont, California: Lear Siegler, Inc.,/Fearon Publishers, 1967.

Task Analysis

1. List all the tasks that might be included in the job.

Example: Vocation--Service Station Mechanic/Attendant

Cleans or replaces spark plugs
Adjusts and bleeds brakes
Replaces wheel cylinders
Inspects and flushes radiators
Tests antifreeze
Repairs tube or tubeless tires
Rotates tires
Lubricates vehicles
Balances tires
Replaces air cleaners
Cleans or replaces gas filters
Washes and waxes autos
Sells auto accessories
Replaces oil filters
Checks oil, brake fluid, power steering, etc.
Washes windshields, replaces blades
Fills gas tanks, radiators
Keeps daily records of sales, inventory changes
Orders supplies
Opens and closes station

2. Indicate frequency of performance, importance, and learning difficulty for each task.

Example: Electronics Technician

Task	Frequency of Performance	Importance	Learning Difficulty
Performs chassis layouts	Once a week	2	Easy
Use small hand tools	Continuously	1	Easy tools
Interprets test instruments	Frequently	1	Difficult

3. List the steps involved in each of the tasks in terms of what the person does when performing the step.

Example: Task--Clean and replace air filter

Identify the type of cleaner to be used
Remove filter assembly
Drain and clean cartridge and filter holder
Refill bowl with clean oil
Reassemble unit into mount
Check area and replace tools

4. Indicate type of performance and learning difficulty.

Example: Vocation--Service Station Mechanic/Attendant
Task--Clean and replace spark plugs

(Partial listing)

Steps in Performing the Task	Type of Performance	Learning Difficulty
Remove all spark plugs	Manipulation	Moderately difficult
Identify the types of plugs	Discrimination	Easy
Decide whether to adjust or replace plugs	Problem-solving	Moderately difficult

Example from the V-TECS Catalog

DUTY: Performing Stenographic Activities

TASK: Take and transcribe shorthand dictation

73. PERFORMANCE OBJECTIVE

Given five unpreviewed letters containing common business vocabulary dictated at 80 words per minute, transcribe all letters in an acceptable letter style. Performance will be rated on accuracy and speed:

(1) At least four mailable letters, as determined to the checklist (not included), must be produced.

(2) Transcription speed must be at least 20-25 words per minute.

CRITERION-REFERENCED MEASURE:

Record and transcribe the five letters dictated by your instructor.

PERFORMANCE GUIDE:

1. Assemble necessary supplies for dictation
2. Record dictation
3. Assemble necessary supplies for transcription
4. Read over letters to be transcribed
5. Type letters (use dictionary or other reference material as needed)
6. Proofread letters, and correct all typographical errors

From the V-TECS Catalog for Secretary, 1980

Blocks, Modules, and Competencies

Example

Block: Word Processing **Module:** Keyboard Operation

Competencies:

A. Duty: Use typing skills

1. Format
2. Key in text/date

B. Duty: Operate terminal

1. Follow security procedures
2. Sign on
3. Use command/function keys
4. Use cursor keys
5. Use 10-key
6. Diagnose problems
7. Correct problems
8. Sign off

C. Duty: Handle storage media

1. Follow security procedures
2. Initialize media
3. Load and unload media properly
4. Perform backup routine
5. Label media
6. Maintain media
7. Store media properly

Handout VII - F

How to Write Performance Objectives

Parts of an Objective	How to Write an Objective	Characteristics
1. PERFORMANCE	SPECIFY WHAT THE LEARNER DOES	"MUST KNOW"
Gives very clear statement of exactly what the learner will be able to do after mastery status has been obtained	Use action verbs that are measurable, observable, verifiable, reliable, (not subject to different interpretations)	Information necessary for successful job performance such as name, labels, facts, etc. The skills of thinking, creating, and analyzing "MUST DO" Physical or manipulative activity, requiring movement of some muscles of the body Directly Observable
2. CONDITIONS	SPECIFY WHAT THE IS GIVEN	RESOURCES THE LEARNER IS GIVEN
Identifies any and all limits or circumstances under which the student will perform the objective	List the job aids, equipment, technical references, special tools, environmental conditions, special instructions, signals symbols, problem situations, or contingencies	E.g. a recipe; a set of drawings; a formula; etc. ENVIRONMENTAL CONDITIONS E.g., with background noise; in a shop setting; outdoors in rainy weather; without supervision, etc.

3.	**CRITERION**	**SPECIFY THE OUTPUT AND HOW WELL IT IS DONE**	**PRECISE NATURE OF THE OUTPUT**
	Sets minumum standard that the student must meet in order to be classified as having obtained mastery	Provides a complete discription of (1) the procedure or product desired and (2) criteria for its acceptability	E.g., number of features; number of steps, points, pieces, etc.; what must be covered or produced; acceptable portion of total; exact numbers reflecting tolerance; values or dimensions that acceptable answers/ performance can assume
			HOW WELL
			1. Standard operating procedure 2. No error 3. Minimum acceptable 4. Time requirements 5. Rate of production 6. Qualitative requirements

Student Profile Form
Needed Data

Competency Profile

Instructional Program (Occupational Objective/Name/Address/School/Date/Social Security Number/Telephone Number/Age/Sex/Date of Birth/Racial-Ethic Designation/Special Needs/Emergency Contact Data

Method of Instruction/Grade/Enrollment Date/Withdrawal Date/Completion Date/Total Class Hours/Total Class Hours/Total Laboratory Hours/Total On-the-job Training Hours/Instructor

On-the-Job Training/Work Experience

Duration of Employment/Job Title/Supervisor's Name/Training Station/Address of Employer/Telephone Number

Follow-up Record

Date/Current Address/Educational Status/Educational Institution/Educational Objective/Not in Labor Force/Unemployed/Military Status/Employed/Employer/Address/Supervisor/Position/Related to Training/Salary

Common Essential Elements for all Vocational Programs

Example: Identify characteristics and responsibilities of leaders.

Competencies for Identified Priority Occupation

Example: Use automatic pagination and numbering.

Strategies for Collaboration

*Part-time vocational teachers from business and industry

*Shadowing experiences

*Vocational teacher internships in business and industry

*Retiree volunteer programs

*Apprenticeship training

*Retraining the unemployed/displaced worker

*Workshops/conferences

*Curriculum development

*Adopt-a-school program

*Teacher training program

*Joint training program

*College credit for vocational training provided by a community college

*School credit for occupational training provided in the workplace

*Tax incentives for employers

*Incentives to students

*Inservice for employers and employees

*Community programs

*Graduate credit for occupational experience gained by vocational instructors

*Salary increments for occupational experience gained by vocational instructors

*Field trips

*Speaker's bureau

HANDOUTS

Figure 4. Process for Assessing Training Needs for Priority Occupations

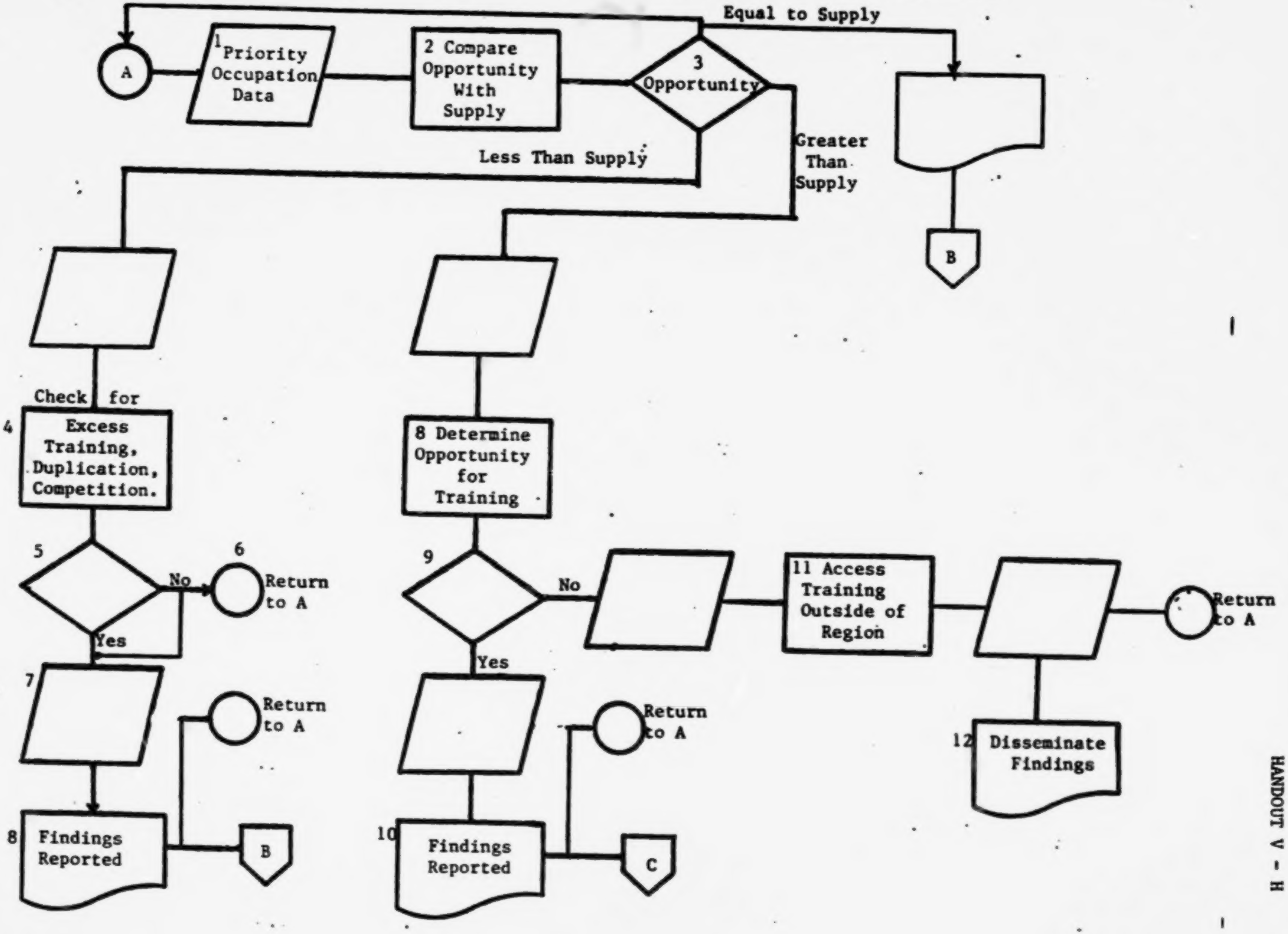


TABLE 5

EMPLOYMENT[1] BY OCCUPATION FOR 1978, PROJECTIONS TO 1985, WITH ANNUAL AVERAGE JOB OPENINGS

SHERMAN-DENISON SMSA

Occupation	Annual Average Employment		Annual Average Job Openings		
	1978	1985	Growth[2]	Replacement[3]	Total Demand
TOTAL, ALL OCCUPATIONS	33,900	44,400	1,500	1,105	2,605
Professional, Technical, & Kindred Workers	5,250	7,050	260	160	420
Computer Specialists	150	200	5	0	5
Computer Systems Analysts	50	100	5	0	5
Engineering & Science Technicians	600	800	30	10	40
Drafters	150	200	5	0	5
Electrical & Electronic Technicians	250	350	15	5	20
Engineers	550	800	35	10	45
Engineers, Electrical	350	500	20	5	25
Engineers, Mechanical	50	100	5	0	5
Health Technologists & Technicians	600	850	35	25	60
Dental Hygienists & Assistants	50	100	5	5	10
Licensed Practical Nurses	300	450	20	15	35
Medical Workers, Ex. Technicians	550	800	35	20	55
Nurses, Professional	300	400	15	15	30
Physicians, Medical & Osteopathic	100	150	5	0	5
Teachers	1,200	1,450	35	40	75
Teachers, College	250	300	5	5	10
Teachers, Elementary	350	400	5	15	20
Teachers, Preschool & Kindergarten	50	100	5	5	10
Teachers, Secondary	400	500	15	15	30
Technicians, Ex. Health	100	150	5	0	5
Writers, Artists, & Entertainers	250	300	5	5	10
Designers	50	100	5	0	5
Other Professional & Technical Workers	1,150	1,550	55	45	100
Accountants & Auditors	250	300	5	10	15
Buyers, Trade	50	100	5	5	10
Caseworkers	50	100	5	5	10
Clergy	150	200	5	10	15
Lawyers & Kindred Workers	50	100	5	0	5
Personnel & Labor Relations Specialists	50	100	5	0	5
Purchasing Agents & Buyers	50	100	5	0	5
Recreation Workers	50	100	5	0	5
Managers & Officials	2,600	3,450	120	125	245
Managers, Store	300	350	5	15	20
Sales Managers, Retail Trade	50	100	5	0	5
Sales Workers	2,050	2,500	65	85	150
Sales Clerks	1,050	1,250	30	45	75
Clerical Workers	5,850	7,650	255	200	455
Accounting Clerks	250	350	15	10	25
Bank Tellers	100	150	5	5	10
Bookkeepers, Hand	300	400	15	10	25
Bookkeeping & Billing Machine Operators	50	100	5	5	10
Cashiers	550	650	15	20	35
Clerical Supervisors	150	200	5	5	10
Computer & Peripheral Equipment Operators	50	100	5	0	5
Counter Clerks, Ex. Food	100	150	5	5	10
File Clerks, Total	100	150	5	5	10
General Clerks, Office	800	1,050	35	30	65
Mail Carriers, Postal Service	100	150	5	5	10
Payroll & Timekeeping Clerks	50	100	5	0	5
Receptionists	150	200	5	5	10
Secretaries	800	1,100	45	30	75
Shipping Clerks & Packers	300	350	5	5	10
Stock Clerks & Store Keepers	350	450	15	10	25
Switchboard Operators	50	100	5	5	10
Teachers Aides, Ex. Monitors	150	200	5	5	10
Telephone Operators	50	100	5	0	5
Typists	250	300	5	10	15
Crafts & Kindred Workers	4,300	5,650	195	120	315
Blue Collar Working Supervisors	600	750	20	15	35
Construction Crafts Workers	950	1,300	55	30	85
Carpenters	250	350	15	10	25

BEST COPY AVAILABLE

TABLE 5 (continued)

EMPLOYMENT[1] BY OCCUPATION FOR 1978, PROJECTIONS TO 1985, WITH ANNUAL AVERAGE JOB OPENINGS

SHERMAN-DENISON SMSA

Occupation	Annual Average Employment		Annual Average Job Openings		
	1978	1985	Growth[2]	Replacement[3]	Total[4] Demand
Cement & Concrete Finishers	50	100	5	0	5
Electricians	200	250	5	5	10
Excavating & Grading Machine Operators	150	250	15	5	20
Plumbers & Pipefitters	100	150	5	5	10
Mechanics, Repairers, & Installers	900	1,150	40	25	65
Auto Mechanics	250	300	5	5	10
Heavy Equipment Mechanics	250	300	5	5	10
Railroad Car Shop Repairers	50	100	5	5	10
Metalworking Crafts Workers, Ex. Mechanical	500	650	20	10	30
Machinists	150	200	5	5	10
Sheet Metal Workers	100	150	5	0	5
Printing Trade Crafts Workers	100	150	5	0	5
Transportation & Public Utilities Crafts Workers	150	200	5	5	10
Electric Power Line Installers & Repairers	50	100	5	0	5
Other Crafts & Kindred Workers	1,100	1,450	50	35	85
Artificial Appliance Makers	50	100	5	0	5
Inspectors	250	350	15	10	25
Maintenance Repairers, General Utilities	300	350	5	5	10
Stationary Engineers, Total	50	100	5	5	10
Operatives	7,250	9,550	325	170	495
Operatives, Ex. Transportation	5,400	7,150	245	125	370
Semiskilled Metalworkers	800	1,100	45	15	60
Lathe & Milling Machine Operatives	100	150	5	0	5
Machine Tool Operators, Combo	50	100	5	0	5
Punch & Stamping Press Operatives	50	100	5	0	5
Welders & Flamecutters	50	100	5	0	5
Welders & Flamecutters--A	50	100	5	0	5
Welders & Flamecutters--B	100	150	5	0	5
Semiskilled Packers & Inspectors	500	650	20	15	35
Packers & Wrappers	450	600	20	15	35
Semiskilled Textile Operatives	250	300	5	5	10
Spinners, Twisters, & Winders	100	150	5	0	5
Other Operatives, Ex. Transportation	3,850	5,100	175	90	265
Assemblers--C	750	1,050	45	20	65
Assemblers, Electrical & Electronic--A	100	150	5	5	10
Assemblers, Electrical & Electronic--B	250	350	15	5	20
Butchers, All-Around	50	100	5	0	5
Garage Workers & Gas Station Attendants	150	200	5	5	10
Laundry & Drycleaning Operatives	50	100	5	0	5
Mine Operatives	50	150	15	0	15
Painters, Manufactured Articles	50	100	5	0	5
Sewing Mach. Oprs., Reg. Equip., Garment	600	700	15	25	40
Sewing Mach. Oprs., Spec. Equip., Garment	50	100	5	5	10
Winding Operatives	50	100	5	0	5
Transportation Equipment Operatives	1,200	1,550	50	30	80
Bus Drivers	50	100	5	5	10
Delivery & Route Workers	300	350	5	5	10
Fork Lift & Tow Motor Operatives	150	200	5	0	5
Truck Drivers	500	650	20	10	30
All Other Semiskilled Workers	650	850	30	15	45
Service Workers	4,400	5,700	185	180	365
Child Care Attendants & Workers	100	150	5	10	15
Cooks, Ex. Private	350	450	15	15	30
Fire Fighters, Total	100	150	5	0	5
Food Preparation Workers	250	300	5	10	15
Guards	150	200	5	10	15
Hairdressers & Cosmetologists	100	150	5	5	10
Janitors & Sextons	950	1,250	45	45	90
Kitchen Helpers	250	350	15	10	25
Nurses Aides & Orderlies	550	800	35	25	60
Police & Detectives	200	250	5	5	10
Supervisors, Nonworking	50	100	5	0	5
Waiters & Waitresses	550	650	15	20	35

BEST COPY AVAILABLE

HANDOUT V - J (3)

TABLE 5 (continued)

EMPLOYMENT[1] BY OCCUPATION FOR 1978, PROJECTIONS TO 1985, WITH ANNUAL AVERAGE JOB OPENINGS

SHERMAN-DENISON SMSA

Occupation	Annual Average Employment		Annual Average Job Openings		
	1978	1985	Growth[2]	Replacement[3]	Total[4] Demand
Laborers, Except Farm	2,200	2,850	95	65	160
Construction Laborers, Ex. Carpenter Helpers	100	150	5	5	10
Gardeners & Groundskeepers, Ex. Farm	100	150	5	10	15
Helpers, Trades	550	800	35	20	55
Order Fillers	150	200	5	5	10
Stock Clerks	200	250	5	5	10

[1] Total employment only-includes nonagricultural wage and salary employment.

[2] Annual Average estimates were developed from 1978-1985 expansion totals.

[3] Based on estimated annual death and retirement rates for selected occupations by sex and age for employed workers in the United States.

[4] Total needs from job expansion and death and retirement.

THE COMMUNITY OCCUPATIONAL SURVEY

INTRODUCTION

Vocational Education has an obligation to assess current and projected occupational needs. This assessment calls for an analysis of the present and future occupational needs as relationship to job skills. The Community Occupational Survey will determine the availability of employemnt opportunities within a Technical Assistance Region.

The specific purposes of this survey is to determine occupational needs in relationship to the existing programs being provided, present employment in specific occupations and future job opportunities.

PLANNING AND ORGANIZING THE SURVEY

The independent school district and local community college should designate a person to serve as survey director and who, in turn, should organize a survey committee composed of representatives of each major occupational category to be surveyed. Administrators are urged to select at least one representative from agricultural, distributive, health, homemaking, industrial, office, and technical occupations. The survey will be utmost use if it is used as a joint effort between the involved school districts and the local community college.

An initial planning conference attended by the representatives of the specific occupations and the survey director will be held to:

- Review the objectives and scope of the occupational survey.
- Establish procedures for the collection of the survey data.
- Establish the date for the completion of the survey.
- Identify the procedures for the compilation and dissemination of the survey data.
- Schedule an orientation meeting for the survey committee.

CONDUCTING THE SURVEY

The specific methods and techniques used in collecting the occupational data will be identified at the initial planning conference. Person to person contact between the collector of data and the employer is preferable, but in some instances it may be necessary to gather the required information by mail or telephone. Businesses may also be contacted through the Tax Rolls and Chamber of Commerce Memberships. The survey directors should select the method, or combination of methods most suitable for the community concerned at the initial planning conference. When the occupational survey is conductedd, employers should be informed that a follow-up telephone survey will be conducted the next year to update the information initially obtained.

Nine data sheets have been developed to aid in the initial tabulation and subsequent reporting of the survey data. The first sheet, labeled Sheet A, serves to identify the employer and enables him/her to present his/her views concerning the need for vocational education programs for present and potential employees. The remaining sheets provide for the listing of the number of individuals employed in specific occupations at the time of the survey and provide for an indication of the number of new employees the employer will need based on one year, two year, and five year projections. THESE PROJECTED NEEDS FOR NEW EMPLOYEES ARE THE MOST IMPORTANT DATA COLLECTED DURING THE SURVEY AND EMPLOYERS SHOULD BE URGED TO MAKE REALISTIC ESTIMATES OF THEIR FUTURE NEEDS. The nine data sheets are identified as follows:

Sheet A	Employer Identification and General Data
Sheet B	Agricultural Occupations
Sheet C	Distributive Occupations
Sheet D	Health Occupations
Sheet E	Home Economics Occupations

Sheet F Industrial Occupations

Sheet G Office Occupations

Sheet H Technical Occupations

Sheet I Public Service Occupations

The forms provided for the occupational survey should be reproduced. Reproduce as many confidential sheets as there are businesses identified and as many second sheets as indicated for each type of occupation. Type as much information as possible on the confidential sheets before the survey is conducted. Publicity should be wide spread by means of the media of the community such as newspapers and radio, and announcements to civic groups in the community.

REPORTING THE RESULTS OF THE SURVEY

On the date previously agreed upon for the completion of the survey, the survey committee will convene to collect the survey data. The individual data sheets will be consolidated into a single set of data sheets which will show a tabulation of the total findings of the occupational survey. These tabulations will be presented for review and evaluation of procedures.

THE SURVEY FORM

The attached form is an excerpt from the Community Occupational Survey. Sheet A is the General Data portion, which will provide information in terms of the type of occupation, requirements needed for performing that occupation, and the needed educational requirements for the job. There is also space to list training programs that would contribute to the success of both the business providing the occupation and the employee. Sheet G, designated as Business and Office Occupations, shows the specific occupations listed under the C.I.P. Code 07.0705, General Office Clerk. The occupational title (D.O.T.) is listed and cross referenced with the appropriate O.E.S. code. This crosswalk will be beneficial in terms of collecting, reporting, and reviewing the data. In terms of program and occupational needs, the form will be of extreme use since most reporting of occupations done by the Texas Employment Commission is based on the O.E.S. code.

GENERAL DATA

COMMUNITY OCCUPATIONAL SURVEY
(Sheet A)

CONFIDENTIAL INFORMATION

Name of Firm: ____________________

School District: ____________________

Firm Address: ____________________

____________________ Telephone No. __________

Type of Business: ____________________

Does your business have a training program for beginners? Yes ___ No ___

Describe type of of training program: ____________________

____

____

EDUCATION REQUIREMENTS FOR NEW EMPLOYEES: ____________________

____

List the training activities or programs which would contribute to business and employees success.

____

____

____

____

____

____

____

____

COMMUNITY OCCUPATIONAL SURVEY
(Sheet AA)

1. Do you presently employ handicapped individuals? ____________

2. Please list the jobs for which you presently employ or you would hire a handicapped individual.

____

____

____

____

____

____

3. Please place a check mark beside the appropriate kinds of handicapping conditions of employees you presently hire or feel that you might hire.

_____ Mentally retarded

_____ Hard of hearing

_____ Deaf

_____ Speech Impaired

_____ Visually handicapped

_____ Seriously emotionally disturbed

_____ Orthopedically impaired

_____ Other health impaired or persons with specific learning disabilities

_____ Specific learning disability

_____ Deaf/Blind

_____ Multihandicapped

HANDOUT V - K (7)

Business and Office Occupations

(Sheet G)

Occupational Category C.I.P. Code: 07.0705 General Office Clerk		Present Employees	Employees Needed		
DOT Title	O.E.S. Code		1 Year	2 Year	5 Year
Clerk, General	61333				
Circulation Clerk	61416				
License Clerk	61436				
File Clerk	61330				
Fingerprint Clerk	61330				
Record Clerk	61330				
Tape Librarian	61330				
Brand Recorder	61900				
Identification Technician	61900				
News Assistant	61900				
Trip Follower	61900				
Credit Card Clerk	61900				
Suggestion Clerk	61900				
Addresser	61900				
Traffic Clerk	61386				
Totals					
Use the lines below to enumerate all other occupations employed by this business, but not classifiable in the occupational categories listed above.					

HANDOUT V - L

DETERMINING TRAINING REQUIREMENTS

Priority Occupation(s) Identified

1. Training needs of Business, Industry and Government Determined

- **Entry level employment**
- **Employment below entry level but prepared for entry into company OJT**
- **Upgrading of present employees**

2. Occupational committee(s) created

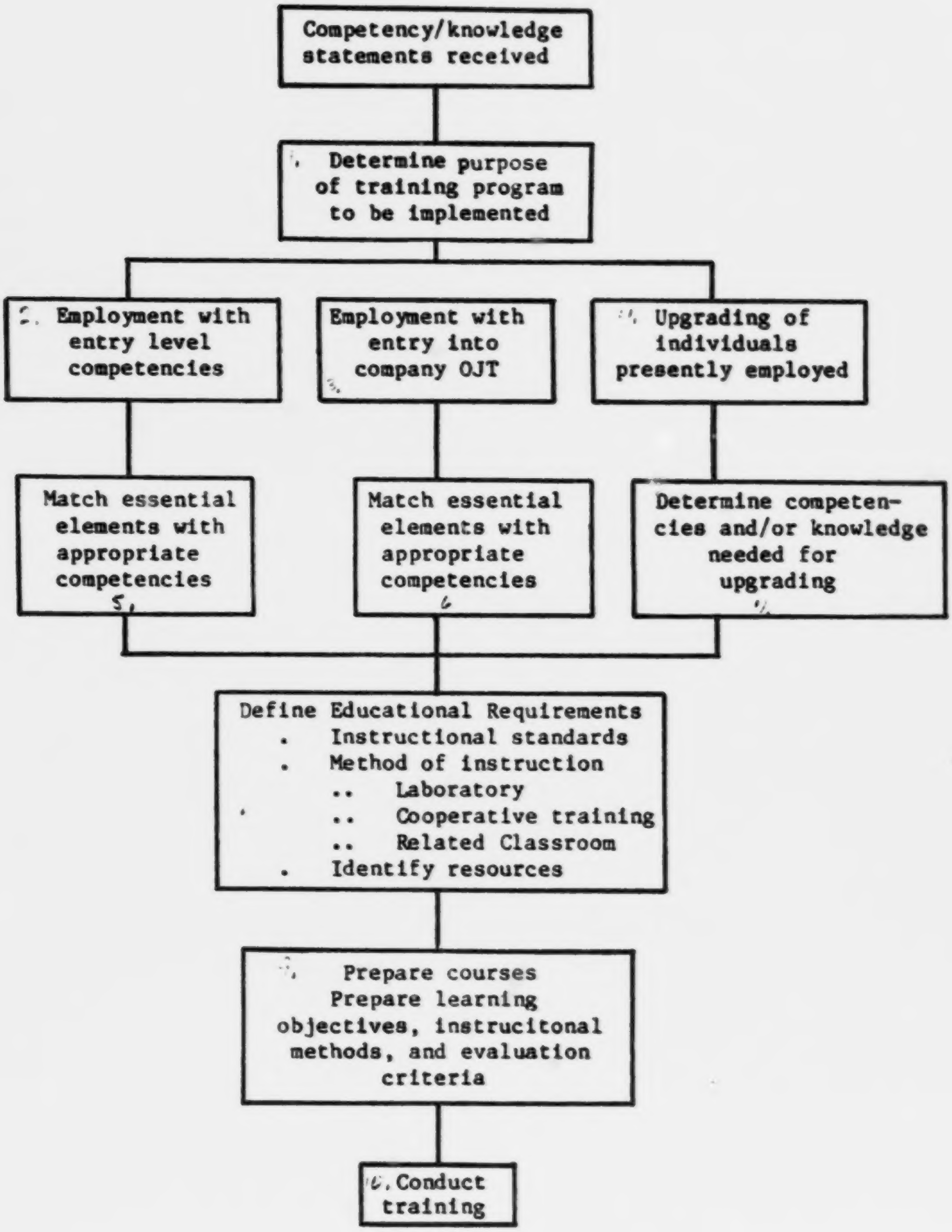
3. Committee(s) validate competencies of occupation

4. Knowledge and competency statement prepared by occupational committee(s)

5. Competency and knowledge statements disseminated

HANDOUT V - M

PLANNING THE TRAINING PROGRAM(S)


Competency/knowledge statements received
1. Determine purpose of training program to be implemented
2. Employment with entry level competencies
Employment with entry into company OJT
3.
4. Upgrading of individuals presently employed
Match essential elements with appropriate competencies
5,
Match essential elements with appropriate competencies
6
Determine competencies and/or knowledge needed for upgrading
7.
Define Educational Requirements
. Instructional standards
. Method of instruction
.. Laboratory
.. Cooperative training
.. Related Classroom
. Identify resources
9. Prepare courses
Prepare learning objectives, instrucitonal methods, and evaluation criteria
10. Conduct training

An Example of the Need for a Comprehensive Communication System for Planning and Articulation

LEGAL REQUIREMENTS	DATA	SOURCE	USERS	INFORMATION COMPILED BY	INFORMATION DISSEMINATED TO
Carl D. Perkins Act . State Plan . Annual Program Plan	. Current & Projected Employment Opportunities	Business, Industry, Government (BIG)	State Staff (State Plan)	State	National
	. Program Enrollments	LEA's PSI's	State, National	State	National
	. Program Terminations	LEA's PSI's	State, National	State	National
State Board for Occupational Education Rules and Regulations . Local Application . Sunset Act	. Current and Projected Employment Opportunities	BIG Community Surveys	Regions LEA's Post Secondary Institutions (PSI)	Region*	State LEA, PSI, SDA, CBO
	. Program Enrollments	LEA's PSI's	State LEA's PSE's Regions	Region	State, LEA PSI, SDA, CBO
	. Program Termination .. Completers .. Leavers	LEA's PSI's	State, Region LEA's PSI's	Region	State, LEA, PSI, SDA, CBO
	. Training Needs .. BIG .. Individuals	BIG LEA PSI	State, Regional LEA, PSI	Region	State, LEA, PSI, SDA, CBO

* Area served by provider as determined by TEA.

FIGURE 1

COMMUNICATION SYSTEM FOR REGIONAL PLANNING/ARTICULATION

I. PLANNING

(1)
ASSESSMENT OF
NEEDS OF
POPULATIONS(S)
WHO MAY BE
SERVED

(2)
ASSESSMENT
OF
LABOR MARKET
TRAINING NEEDS

(2)
EVALUATION OF
PROGRAMS, SERVICES
AND
ACTIVITIES

(3)
EVALUATION AND/OR
ASSESSMENT OF
RESOURCES AND
FACILITIES

DATA COLLECTED

DATA ANALYZED

WHAT IS

(5)
WHAT SHOULD BE

DECISION FOR
PROGRAM:
- IMPROVEMENT
- REDIRECTION
- ADDITION
- ARTICULATION

FIGURE 2

COMMUNICATION SYSTEM FOR REGIONAL PLANNING

SUBSYSTEM A: ASSESSMENT OF NEEDS OF POPULATIONS(S) SERVED

POPULATIONS(S)	DATA COLLECTED	SOURCE
In School Youth Talented & Gifted Regular Disadvantaged Educational Economically Handicapped Limited English Proficiency Out of School Youth (Drop outs) Limited Academic Skills No Job Skills	Career Choice Educational Plans Achievement in Basic Skills Need for Support Services Vocational Enrollments Characteristics age, sex, ethnicity, etc.	Providers Obtain from existing files. Conduct survey if data not presently available. Census data Economic Planners
Adults Unemployed Need Upgrading Single Parents Business, Industry and Government	Training Needs Training Requirements Types of Training . Long Term . Short Term Preparatory . Supplemental (upgrading) . Apprenticeship	Employers, Associations and Organizations (Hotel/Restaurant Association, Independend Garage Owners Association) Joint Apprenticeship Texas Employment Commission

HANDOUT VI - C

FIGURE 3

COMMUNICATION SYSTEM FOR REGIONAL PLANNING

SUBSYSTEM B: ASSESSMENT OF LABOR MARKET NEEDS

(Labor Market Demand ± Labor Market Supply = Needs)

POTENTIAL LABOR MARKET DEMAND	DATA COLLECTED	SOURCE
Employment Opportunties immediate long-range future (new and emerging)	Potential Job Opportunities by Program (SOC Codes DOT Codes OES Codes) Priorities Assessed	Texas Employment Commission State Occupational Information Committee Community Surveys (Chambers of Commerce School conducted)
POTENTIAL LABOR MARKET SUPPLY		
Available but unemployed Immigration Completers	Number employed by Program Number immigrating by Program Number of completers by Program	Texas Employment Commission Local Education Agencies Post Secondary Institutions Community Based Organizations Other State Agencies and Commissions State Examining Board Proprietary Schools (C.I.P. COde, HEGIS Code, D.O.T., TEA Codes, OES Code, VPO)

HANDOUT VI - D

FIGURE 4

PLANNING

SUBSYSTEM D: ASSESSMENT AND EVALUATION OF LOCAL RESOURCES AND FACILITIES

RESOURCES	DATA COLLECTED	SOURCE
Staff	Qualifications Subject mastery Preparation Work Experience Teaching Skills Degrees Certification Performance Reviews Professional Improvement	Teacher file Student follow-up Employer follow-up
Curriculum and instructional materials	Validated Competencies Content in relation to Program Objective(s) Availability of instructional materials Use of available materials	Advisory Committees Teacher Student follow-up Employer follow-up
Equipment	(Same as curriculum)	(Same as curriculum)

FACILITIES	DATA COLLECTED	SOURCE
Programs Services	Size Condition Safety	Teacher file Student follow-up Advisory Committee

HANDOUT VI - E

FIGURE 5

FOLLOW-UP

SUBSYSTEM C:

OBJECTIVE OF PROGRAMS	DATA COLLECTED	SOURCE
Preparation for entry level employment Selection of career and pursuit of occupational instruction Preparation for enrollment in technical training	Enrollments (quantitative) Organization for instruction (laboratory, OJT, classroom)	Student file Teacher's file
Supportive Services Achieve stability or advancement in employment Preparation for employment and entry into training program of employer	Job performance (qualitative)	Student file (assessment of performance) Student follow-up Employer follow-up

FIGURE 6

HANDOUT VI - F

Product Index

PI = Product Index	N
A = Available for Employment	6
NA = Not Available for Employment	5
U = Unknown	0
EO = Employed in Occupational field for which trained	4
CE = Continuing with higher education	3
CEO = Continuing education in Occupational field	2
TR = Total eligible to return to course *	9
RC = Returned to course *	7

$$PI = 1/4\left[\frac{A}{A + NA + U} + 2\left(\frac{EO + CEO}{A + CE}\right) + \frac{RC}{TR}\right]$$

$$PI = 1/4\left[\frac{6}{6 + 5 + 0} + 2\left(\frac{4 + 2}{6 + 3}\right) + \frac{7}{9}\right]$$

$$PI = 1/4\left[\frac{6}{11} + 2\left(\frac{6}{9}\right) + \frac{7}{9}\right]$$

$$PI = 1/4\left[.545 + \left(.666\right) + .777\right]$$

$$PI = 1/4\left[.545 + 1.332 + .777\right]$$

$$PI = 1/4 \quad 2.654$$

$$PI = \quad .6635$$

$$PI = \quad .66$$

* if recommended by the TAC, variables TR and RC can be removed from the formula

FIGURE 7

DATA FLOW AT LOCAL LEVEL

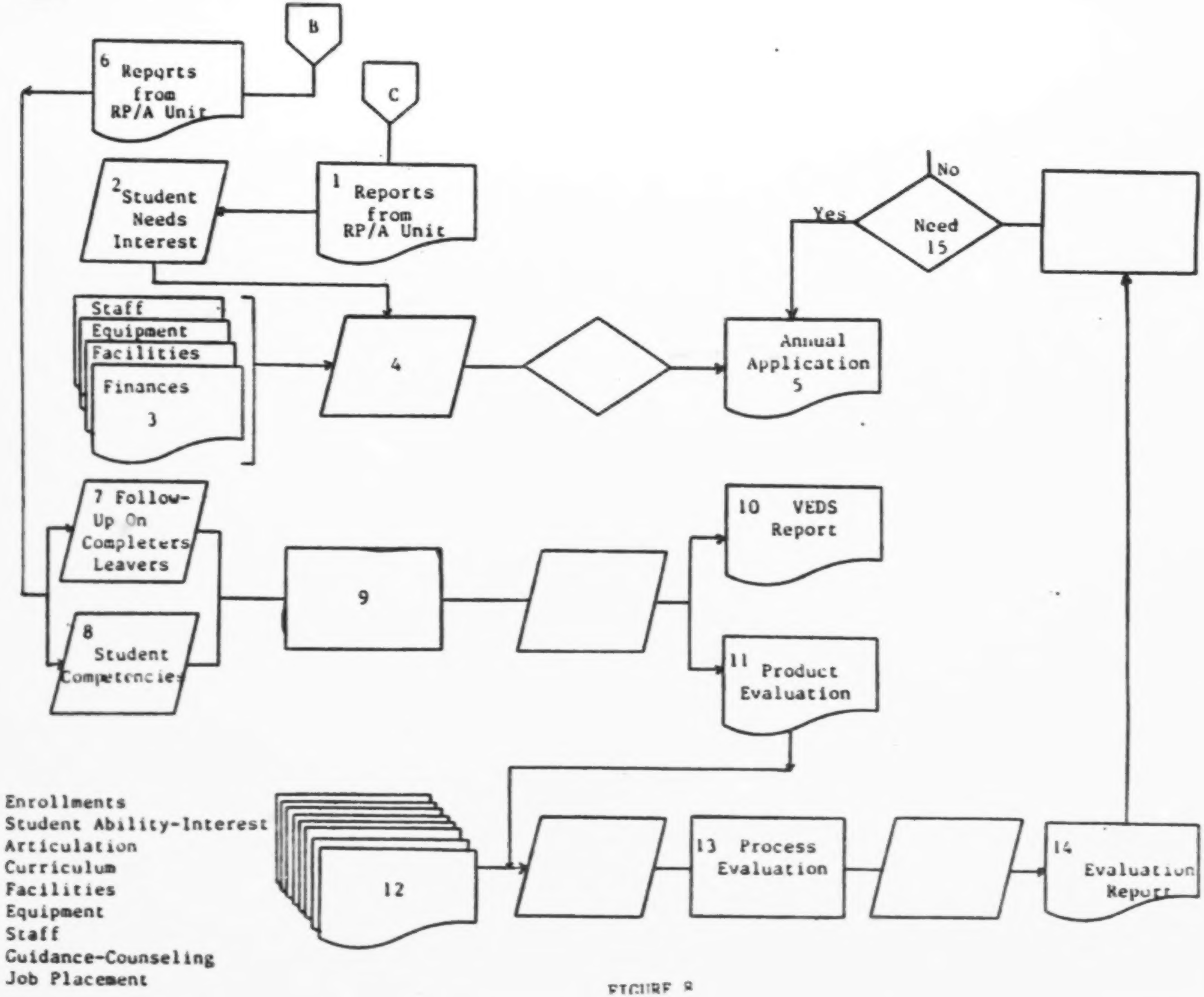
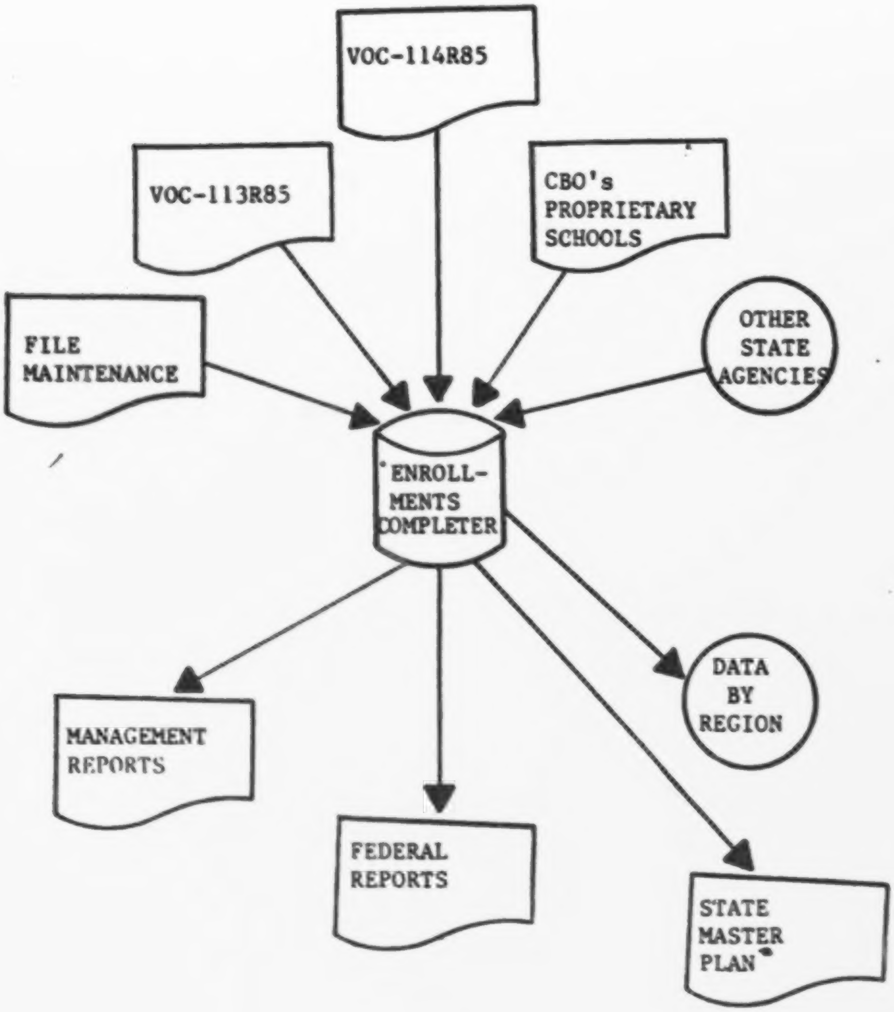


FIGURE 8

HANDOUT VI - H

Data Collection and Dissemination for Planning at Local, Regional and State Levels



CBO - Community Based Organization (basically JTPA programs)

VOC-113R85 - TEA form for collecting secondary program enrollments and completers

VOC-114R85 - TEA form for collecting post secondary program enrollments and completers

Other State Agencies - Enrollment and completion reports of training programs conducted under the auspices of other state agencies.

FIGURE 9

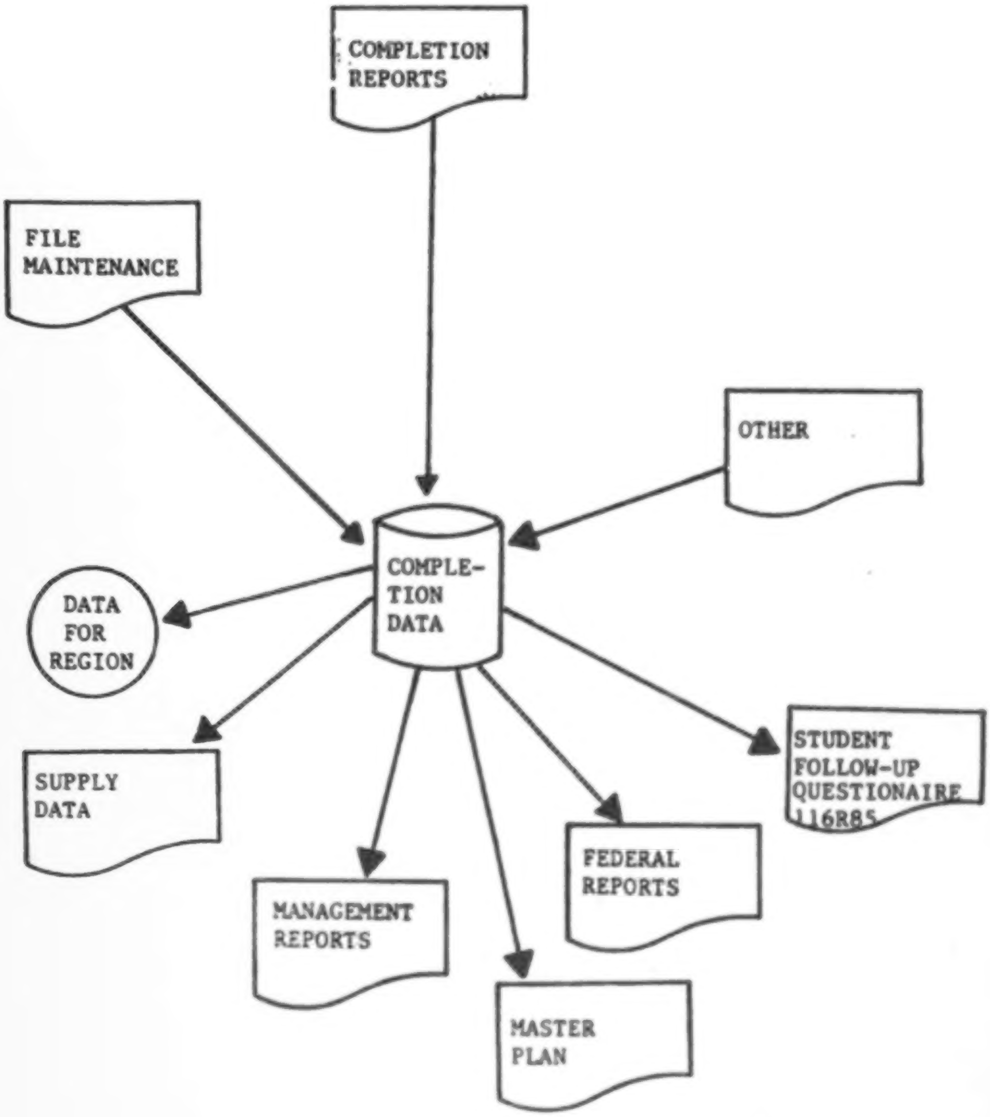

COMPLETION REPORTS
FILE MAINTENANCE
OTHER
COMPLE-TION DATA
DATA FOR REGION
SUPPLY DATA
MANAGEMENT REPORTS
MASTER PLAN
FEDERAL REPORTS
STUDENT FOLLOW-UP QUESTIONAIRE 116R85

FIGURE 10

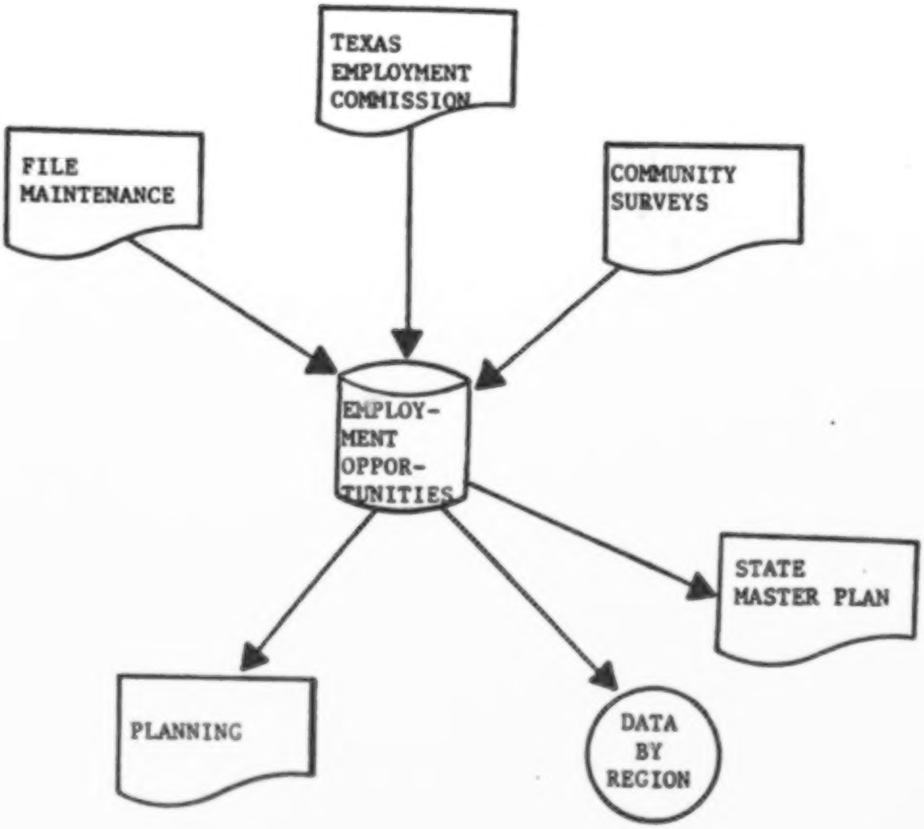

TEXAS EMPLOYMENT COMMISSION
FILE MAINTENANCE
COMMUNITY SURVEYS
EMPLOY-MENT OPPOR-TUNITIES
STATE MASTER PLAN
PLANNING
DATA BY REGION

FIGURE 11

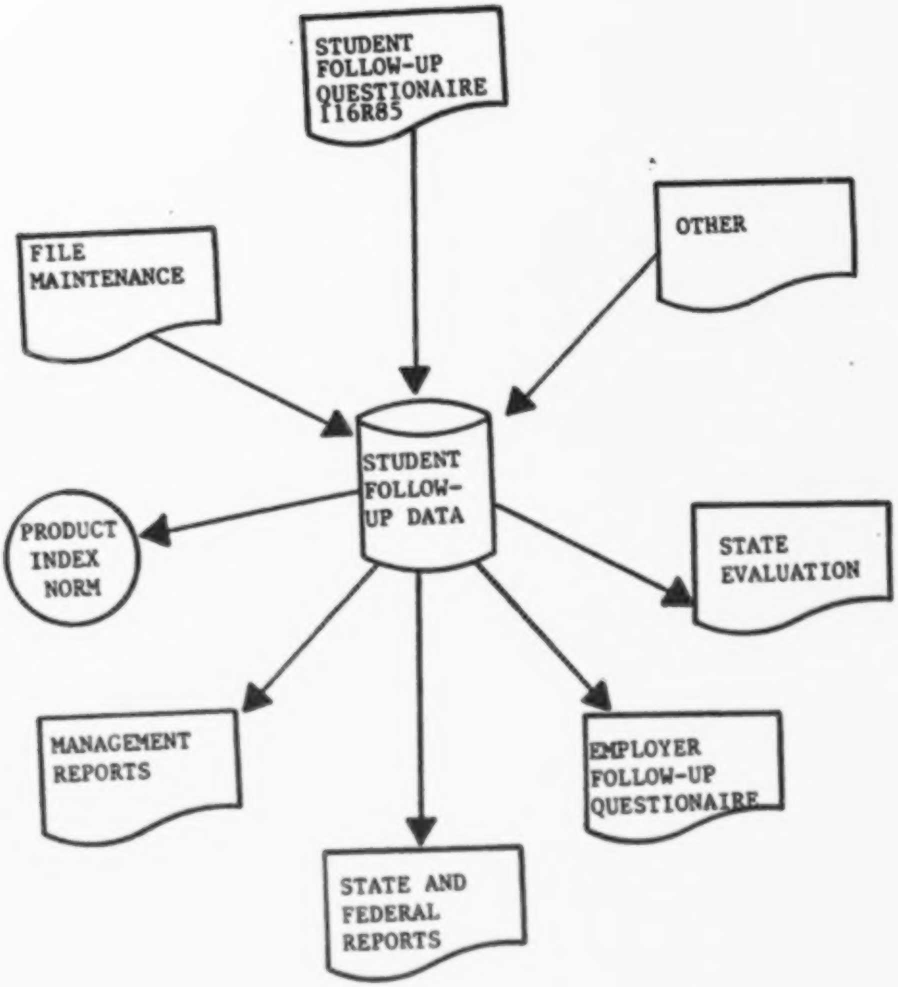

STUDENT FOLLOW-UP QUESTIONAIRE I16R85
FILE MAINTENANCE
OTHER
STUDENT FOLLOW-UP DATA
PRODUCT INDEX NORM
STATE EVALUATION
MANAGEMENT REPORTS
EMPLOYER FOLLOW-UP QUESTIONAIRE
STATE AND FEDERAL REPORTS

FIGURE 12

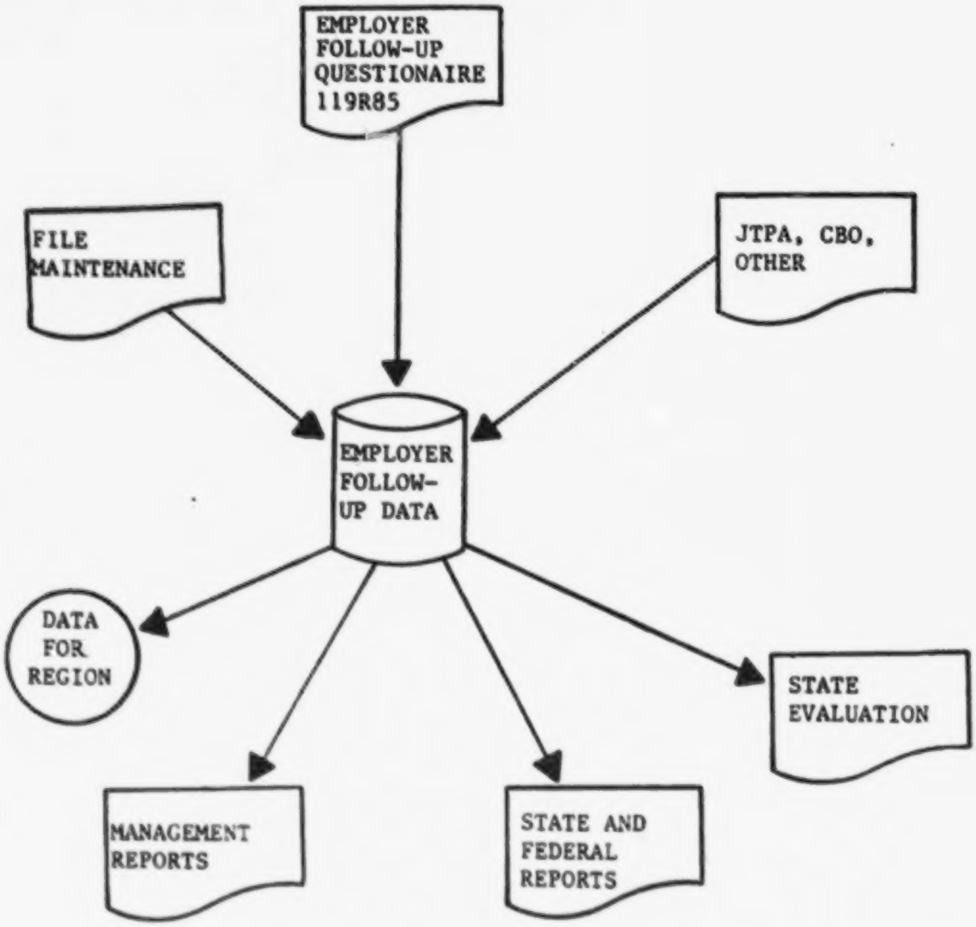
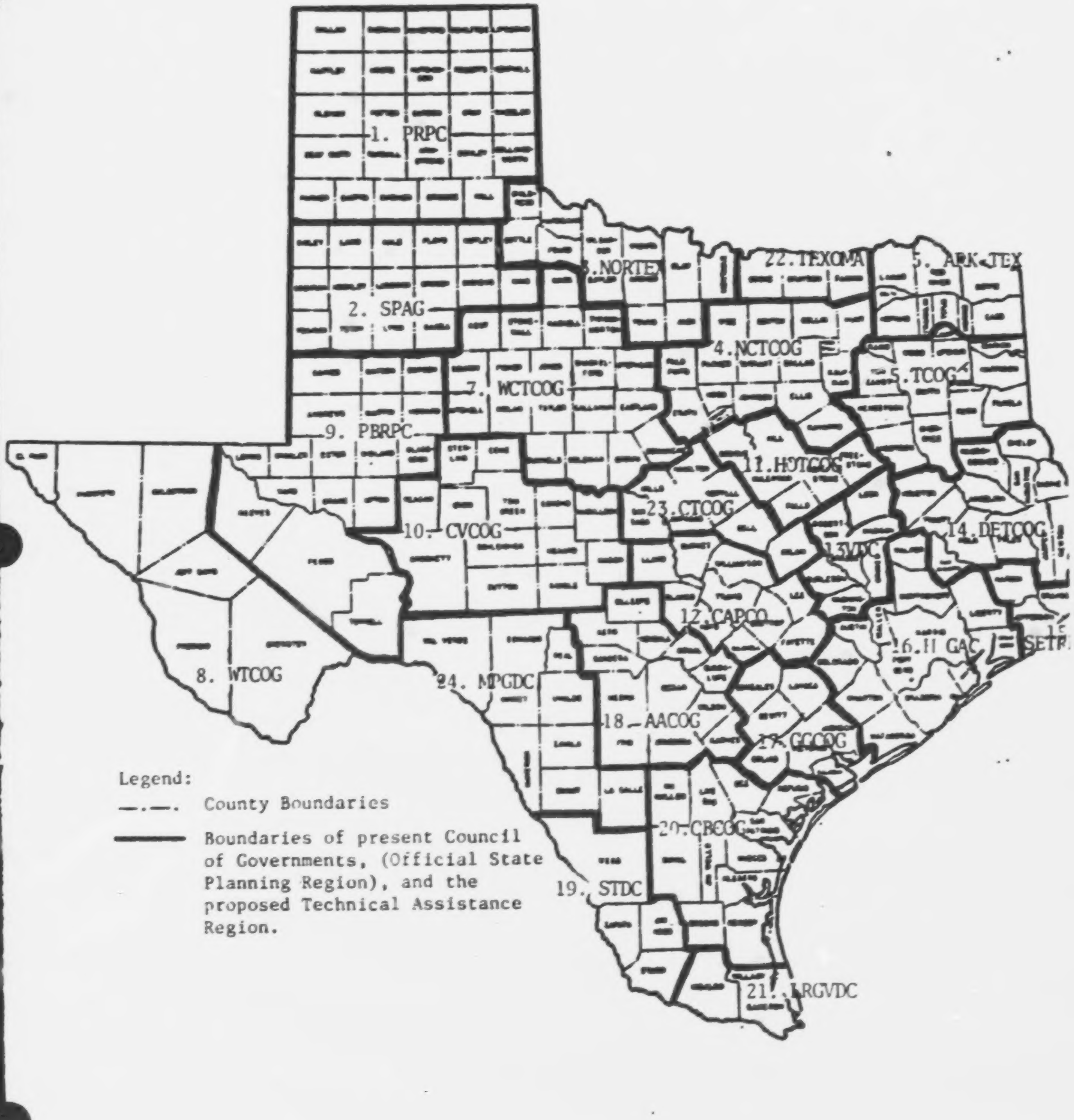

EMPLOYER
FOLLOW-UP
QUESTIONAIRE
119R85
FILE
MAINTENANCE
JTPA, CBO,
OTHER
EMPLOYER
FOLLOW-
UP DATA
DATA
FOR
REGION
STATE
EVALUATION
MANAGEMENT
REPORTS
STATE AND
FEDERAL
REPORTS

FIGURE 13



Legend:

—.—. County Boundaries

▬▬ Boundaries of present Council of Governments, (Official State Planning Region), and the proposed Technical Assistance Region.

BEST COPY AVAILABLE

FIGURE 14